

# Contemporary Psychology

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- |          |  |
|----------|--|
| Page 153 | Behavior Theory and Conditioning, by K. W. Spence<br><i>Reviewed by W. K. ESTES AND J. S. BRUNER</i>                             |
| 157      | Varieties of Human Value, by Charles Morris<br><i>Reviewed by FRANKLIN FEARING</i>   |
| 159      | Sociometry and the Science of Man, by J. L. Moreno (Ed.)<br><i>Reviewed by BEN WILHELMAN</i>                                     |
| 160      | Studies of the Psychology and Behaviour of Captive Animals in Zoos and Circuses, by H. Hediger<br><i>Reviewed by F. A. BEACH</i> |
| 161      | Measurements of Mind and Matter, by G. W. S. Blair<br><i>Reviewed by G. H. COLLIER</i>   |
| 162      | The Teacher and the Child: Personal Interaction in the Classroom, by C. E. Moustakas<br><i>Reviewed by C. E. MEYERS</i>          |

(Continued on inside cover)

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**CONTENTS—continued**

- 164 **CP SPEAKS . . .**  
By the EDITOR
- 166 **The New Psychology for Leadership**, by D. A. Laird and Eleanor C. Laird  
*Reviewed by* H. A. EDGERTON
- 166 **The Foundations of Human Behavior: Dynamic Psychology in Nursing**, by Theresa G. Muller  
*Reviewed by* HELEN NAHM
- 167 **A UNESCO Study of Social Tensions in Aligarh, 1950-1951**, by Pars Ram  
*Reviewed by* RAGNAR ROMMETVEIT
- 167 **The Psychology of Sex-Offenders**, by Albert Ellis and Ralph Brancale, with Ruth R. Doorbar  
*Reviewed by* L. D. COHEN
- 168 **Big Business Leaders in America**, by W. L. Warner and James Abegglen  
*Reviewed by* ANNE ROE
- 169 **Measurement and Evaluation for the Secondary-School Teacher**, by Georgia S. Adams and T. L. Torgerson  
*Reviewed by* W. F. JOHNSON
- 170 **Laughter and the Sense of Humor**, by Edmund Bergler  
*Reviewed by* ROSS STAGNER
- 170 **The Urge to Punish: New Approaches to the Problems of Mental Irresponsibility for Crime**, by Henry Weihofen  
*Reviewed by* G. S. BLUM
- 171 **Measurement of Responsibility: A Study of Work, Payment, and Individual Capacity**, by Elliott Jaques  
*Reviewed by* D. C. PELZ
- 172 **FILMS**  
*Reviewed by* ADOLPH MANOIL, Film Editor  
Films  
Research Materials Received
- 175 **ON THE OTHER HAND . . .**
- 176 **List of Books Received**

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# Contemporary Psychology

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## Behavior Theory: Newtonian or Maxwellian?

**Kenneth W. Spence**

**Behavior Theory and Conditioning.** New Haven: Yale University Press, 1956. Pp. vii + 262. \$4.50.

### Current Model

By W. K. ESTES

*who is Professor of Psychology in Indiana University. He is one of the more learned psychologists who are concerned with learning theory, having been writing and contributing to compendia on the subject for the last dozen years. He's an experimentalist too and admires elegant theorems, clean-cut experiments, and lucid papers, and he says that he hopes to live long enough to see a behavioral theory that fairly earns the title Newtonian—let alone Maxwellian.*

**D**ESPITE its small size, this book will cast a large shadow. Even before publication, Spence's seven concise chapters have served to represent psychology before a general scientific audience in the Silliman Lectures at Yale. It is not every day that a member of the psychological family is invited thus to mix socially on an equal footing with the more blue-blooded sciences. If nothing else, psychologists will be interested in knowing how Spence managed his teacup on this occasion. Also, they may hope to find in Spence's lectures some clue to indicate whether 'behavior theory' is noticeably changing its methods or aspirations as it proceeds without Hull's parental guidance.

By way of an opening gambit, Spence poses the question whether during its first sixty-odd years as an experimental discipline, psychology has progressed toward the status of a full-fledged natural science as rapidly as could reasonably have been expected. His own answer to this question is a stern negative. Considering the advantages of beginning with the experience of other sciences to draw upon, scientific psychology has taken a very slow boat. Although psychologists are less impeded than were physicists by externally imposed obstacles, they are more adept at generating new ones of their own. One of these self-generated retarding influences is the tendency of many psychologists to look down their wholistic and humanistic noses at 'artificial' laboratory experimentation and 'oversimplified' quantitative theorizing. A second is the contemporary psychologist's overeager acceptance of a role as technician for enterprise in social service with the consequent focus of more research energy on problems of obvious practical import than on problems dictated solely by scientific interest and theoretical considerations.

How will the chastised psychologists respond to this lecturing? For my own part, I am inclined to second Spence on most points; I can enter only one or two



KENNETH W. SPENCE

mild caveats on matters of detail. Concerning the allegedly sluggish development of scientific psychology, I often have heard similar comments made and assented to by psychologists of all persuasions, but never with any real questioning of the facts concerning developmental patterns of physical and behavioral sciences at comparable periods. Does the record really support the indictment?

Spence assigns present-day psychology to a stage comparable to physical science at the time of Kepler and Galileo. That would be, say, 1600 to 1630. What had been the chief developments of the preceding three quarters of a century? The only orderly and rapid progress from empirical research to theory occurred in astronomy, the Copernican revolution followed by Brahe's observations and Kepler's formulation of his famous laws. An acceleration of interest in mechanics culminated in Galileo's experimentally



established laws of motion. But it was another half century before these imposing achievements were brought into a single system by Newton's theory. The period under consideration saw the appearance of the microscope and telescope, Gilbert's experiments in electricity, the emergence of the concept of a gas, but the wave and particle theories of light did not follow for still another half century, theories of electrical charge and conduction waited for a full century, and the kinetic theory of gases and thermodynamics still longer.

Matched against the same time-scale, the progress of psychology seems about equally sporadic and uneven. Psychology can claim no broad unifying theories, but physics too found that these do not come quickly or easily. If we take as a yardstick the ability to make quantitative predictions of experimental phenomena in limited areas, psychology does not rate so badly. Psychophysics can claim substantial progress, and Spence's book itself contributes evidence that learning theory is no longer entirely out of the show. Concerning more general matters of methodology, we can hope for little agreement on historical parallels. Should, for example, the shift in descriptive frame of reference from pre-Watsonian mentalism to the operational behaviorism of Skinner, Hull, and their followers be rated as decisive a scientific advance as the Copernican revolution in physical science? If polled on the question, I suspect Spence would cast an affirmative ballot, and so would I, but I gravely doubt that we could carry more than a respectable minority in the APA's council of representatives.

**I**N the last six lectures, history and general methodology are largely put aside while Spence focuses his attention on the form of the conditioning curve and its determination by reinforcing and motivational variables. The system presented is essentially the same as Hull's in method, but narrower in scope, and it manifests some newsworthy divergences in content.

The technique of theory construction for those two men is, first, to assemble the known experimental dependent and independent variables of the problem area, filling in obvious gaps

in the ranks of the independent variables with plausible guesses; second, to postulate a number of hypothetical entities, "constructs," which are said to "intervene" between the dependent variables and selected sets of one or more independent variables; and, third, to make guesses concerning functional relationships among these variables. The chief arguments in favor of this technique, as Hull and Spence have practiced it, are that it leads to a system which instigates and directs worthwhile lines of research and that it provides an express route to good quantitative theories. Concerning the first point, I concede cheerfully that the later chapters of Spence's book provide impressive supporting evidence. Concerning the second, I have some reservations.

My reservations arise partly from a suspicion that only by constant alertness and almost monastic self-restraint can we achieve reasonable assurance that the form of a theory will reflect characteristics of the empirical subject-matter rather than characteristics of the theorist. Unless the empirical terrain is well structured by experimental laws before the theorist begins wholesale postulational activities, he is too nearly, for my liking, in the position of the subject in a Rorschach test. Further, the simultaneous introduction of numerous constructs with their hypothesized interrelationships aggravates the always difficult problem of interpreting empirical tests of the evolving theory.

Having seen how susceptible the system is to inter-theorist differences, one is somewhat prepared for the otherwise surprising number of substantial disparities between Hull's and Spence's formulations. For both, habit strength is assumed to combine additively with inhibition and multiplicatively with motivational variables to determine response strength, but there the detailed correspondence trails off. Spence's inhibitory construct ( $I_R$ ) is simply a shorthand expression for the learning of interfering responses during extinction or during delays of reinforcement, and thus corresponds neither to reactive inhibition ( $I_r$ ) nor to conditioned inhibition ( $sI_R$ ) of Hull's *Principles*. In his treatment of reinforcement, Spence has moved almost into the contiguity camp. He assumes that at least in the case of instrumental

conditioning, reinforcement influences momentary response strength but not habit strength. The latter is determined solely by the number of contiguous occurrences of a stimulus-response combination. Behavioral oscillation is not an autonomous vacillation in neuronal output but a manifestation of uncontrolled stimulus variation. Although Spence retains much of Hull's constructual alphabet and makes no real overtures toward coalition with rival factions of stimulus-response learning theory, he shows by these mutations in definition and usage that he is not oblivious to the empirical trends which in other quarters have given rise to alternative theories.

**T**HE testability of a formulation such as Spence's depends critically on the management of low-level concepts which must be interpreted in terms of observables before predictions can be generated for any specific situation. In the system of Hull and Spence, as in most other contemporary treatments of learning, these concepts have to do with stimulus and response, and with motivational and reinforcing variables. Ideally we should like to have all these concepts rigorously defined, but in practice we find that research and theory cannot wait upon the perfection of formal definitions. In order to get started upon theory construction, we begin with only rough agreement on the usage of such terms as *stimulus* or *reinforcement* in particular situations, and expect progressively to refine and extend the working definitions as theory develops.

Spence avoids a number of pitfalls by not straining, as did Hull, for sweeping generality at an early stage. Whereas Hull attempted to define *stimulus* and *response* in terms of receptor and effector activities and *reinforcement* in terms of the diminution of physiological needs, Spence begins with the experimenter's concepts and limits himself to situations for which usage is reasonably unambiguous. This stratagem seems to work out well enough for stimulus terms, and even for 'reinforcement.' While one cannot in Spence's system specify the properties that qualify an event as a reinforcer, one can apply the system to a number of standard experimental situations without raising the issue of general

definition. Associated with response terms, however, there is a subtle trap which Spence has not successfully skirted.

The crux of the response problem is that Spence proceeds to the detailed working out of 'behavior theory' without first stating, even provisionally, just how much of an organism's activity is to qualify as behavior. The response that is being observed and recorded in an experiment raises few problems; in all of the situations Spence considers, one can say when the given response occurs and when it does not. What one cannot say on many occasions is whether or not the organism is making some other "competing" response whenever it is not making the recorded response. When a subject in an experiment on eyelid conditioning fails to blink, is he making the competing response of holding his eye open, or is he making no response at all? The answer is critical for the interpretation of Spence's model, and in many situations the answer determines not only quantitatively but also qualitatively the predictions that will be made.

Lacking a definition of *response* that will enable one always to decide by observing the organism whether competing responses are occurring, the matter can be handled only by means of definite assumptions about the conditions under which competing responses occur. And these assumptions must remain fixed while one proceeds to test other aspects of the theory. Spence's approach requires one to make a new case for each new situation, appealing either to arguments of plausibility or simply to success in handling the particular data.

Some contemporary theorists have eliminated this perpetual source of *ad hoc* decisions by assuming that whatever the organism is doing at any time qualifies as behavior and thus is modifiable under the same laws which apply to experimenter-designated responses. Whether or not their 'monistic' approach proves ultimately satisfactory, it does provide a basis for determinate and testable theories.

**T**o plot Spence's present position in familiar coordinates, I would locate him approximately at the center of a triangle which has Skinner, Hull, and Bush and

Mosteller at the corners. Compared to the precision machinery of Bush and Mosteller, Spence's mathematical model operates with some clashing of gears, and it gives only moderate mileage (computed in predictions per assumption). But to indulge in a formal critique of Spence's model at this point would be to miss the point of his whole program. Spence clearly remains an experimentalist at heart and uses mathematics to the extent that it offers tangible help in extracting orderly relationships from the refractory raw material of behavior. After sketching his model for conditioning, he reviews the empirical evidence concerning important parameters of reinforcement and then recounts the extensive series of experiments through which he and his associates have materially advanced the experimental analysis of these parameters and have begun the formidable task of expanding qualitative effects into quantitative relationships. This section of the book was, for me, clearly the high point. Contemporary psychology can offer few comparable examples of close and fruitful interaction between theory and experiment.

In his concluding chapter, *Applications to Complex Learning*, Spence's brand of behavior theory exhibits more symptoms of impending maturity than one might have anticipated from the almost pessimistic tone of his introductory lecture. The most striking of these harbingers is the bringing off of a genuine quantitative prediction. By 'genuine' I mean to denote the prediction of an empirical relationship on the basis of information obtained from an independent set of measures. In the course of analyzing the situation which gave rise to this coup, Spence has incidentally set the stage for a real 'first' in learning theory. The experimental situation in question is the one used by Ramond to study the simultaneous acquisition of two barpressing habits with reinforcement controlled by a forcing procedure. The novel possibility set up by Spence's theoretical treatment of the study is that of differentially testing quantitative predictions derivable from two entirely distinct and independent theories. By considering minor variations on Ramond's procedures, one can generate a number of additional predictions from Spence's model; and, interestingly enough, most of

these, unlike the one cited in the book, are diametrically opposed to those derivable from a quantitative learning theory which has grown up contemporaneously with Spence's in a neighboring midwestern state. The remaining question is whether this fine opportunity will be snapped up by an alert experimenter before both models are outmoded by the swift advance of research and left gathering dust among the heirlooms of the '50s.

Spence's book will be more influential than popular. Even fellow professionals who agree with Spence on philosophy and methods will take exception to numerous theoretical details. Some of the demurrers will reflect differences of principle; some will merely reflect mild pique on the part of those whose ideas and contributions receive scant attention from Spence as he single-mindedly follows the dictates of his own system. But all who believe in a natural science approach to psychology can feel that their discipline has been well represented by Spence in these lectures.

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## Mechanism Riding High

By JEROME S. BRUNER

*who is a Professor of Psychology in Harvard University and impatient of being labeled as any particular kind of a psychologist. Perhaps he used to be a social psychologist, and some people think of him now as a cognitive psychologist, but he himself says that he is trying to find out how we achieve, retain and transform information that has predictive value concerning the environment in which we operate, and that in consequence he finds himself doing experimental studies of perception, memory, thinking, and learning. See his A Study of Thinking with Goodnow and Austin, of which the review should soon appear in CP.*

**T**his is a book that is at once modest in its scope and passionately grand in its aspirations. It is a restrained and disciplined exemplar of the great tradition of classical mechanics applied to the behavior of organisms, a tradition that has nurtured the hope of a mechanistic monism in many guises: the Stoics, Alexandrian medicine, Lucretius, Hobbes, Malebranche, the *succès de scandale* of La Mettrie's *L'homme machine*,

Condillac, Hartley's vibratiuncles, and American "behavior theory." It is a remarkable achievement; on every page one reads evidence of the author's ingenuity, his tremendous energy, his long-range planfulness, and his devotion to science as he sees it. It is a confident book, sure in the belief that the general outlines of a behavior theory have been discerned, and that what remains to be done is to iron out the details.

Yet for all the handsome things one can think to say about the first Silliman Lectures delivered by a psychologist—and there are many such things to be said—one is carried inexorably to the conclusion that not only the book, but possibly the tradition it represents, has ended without issue. Behavior theory over the past twenty years has grown uglier, more cumbersome, narrower in its range of predictiveness, more like a highly elaborate game of chess governed by inelegant rules. The rational apparatus that one must manipulate to 'account for' even the simplest behavior has become so formidable and so fraught with the arbitrary game of parameter-estimation that it seems a hopeless tool with which to approach what may now 'seem like 'complex' behavior. Donald Hebb recently remarked that if one made a set of microphotographs of Cambridge, inch by inch, very likely one would fail to discover the Charles River.

LET me illustrate one source of my discouragement in attempting to evaluate this truly distinguished book. It is estimated that there are  $10^{76}$  possible sentences in the English language 50 words in length, and that in the course of a year we hear perhaps  $10^6$  sentences altogether. If one learned the sentences we uttered by a process that is Markovian in nature, eliminating alternatives according to the gradual build-up of excitatory strength, our lives would be far too short to master even the simple prattle of a child. And there is little doubt, moreover, that we would be able to indicate which sentences among the  $10^{76}$  constructed by an algorithm were proper sentences and which not, even though we had never encountered them. It is obvious that 'verbal responses' are not what is 'learned' but, rather, rules and principles of structuring that make

it possible for us to *generate* sentences. The answer to such a point as this is by now familiar: You cannot criticize a thing for what it does not attempt to account for. But the ultimate end of such a defense is that the critic is then forced to celebrate behavior theory of this type as the applied psychology of CS-US linkages, T mazes, and straight runways. The theory deserves far better than that.

THERE are several features of modern behavior theory of Spence's kind that warrant close inspection, since they are possible reasons for the loss of dynamism in this most recent form of behavioral mechanics. Let us list them first and then discuss them. (1) The theory prefers to take as its methodological preceptors the logicians of science rather than to look for guidance to the experience of science itself. (2) It operates with a conception of the stimulus that virtually ignores the meaning of this word both in contemporary sensory physiology and in modern physics. (3) By devising such experimental procedures that stimulus events are statistically independent of each other, it places organisms in an environment that is almost irrelevant to the environment in which learning ordinarily occurs, an environment that is certainly not paradigmatic of the usual one for learning. (4) By virtue of this type of experimental procedure, it hopes to get by the problem of organization in behavior by substituting for it the classical push-pull force-resultant model. Consider each point in turn.

(1) First, methodolatry, to use the phrase coined, I believe, by W. V. Quine. Any science, whatever its subject, requires two criteria in evaluating its activities. One is a criterion of formal nicety. The other is a criterion of relevancy or whatever term you may choose. Freud was doubtless a mess from the formal point of view; he has lived because of his intuitive sense of the relevance and relatedness of phenomena. In modern physics, one distinguishes physicists on the basis of whether they are just good formalists or whether they have 'physical intuition' as well. The latter leads one to choose good or 'deep' problems and hypotheses; the former guarantees an elegant statement of what has been intuitively, crudely grasped.

Logicians of science rarely get deeply enough into a science to understand the intuitive *Fingerspitzengefühl* of the good scientist—the distinction between a promising problem and a trivial one. Spence, like many contemporary behavior theorists, has been deeply influenced by modern logicians of science. So Spence can write in his final paragraph, "Insofar as any realm of observable data presents a consistent set of regularities, it represents a genuine set of phenomena that may legitimately be the object of scientific curiosity and endeavor. The question of whether any particular realm of behavior phenomena is more real or closer to real life and hence should be given priority in investigation does not, or at least should not, arise for the psychologist as *scientist*." In short, for Spence there is no criterion of triviality. What lends itself "to the degrees of control and analysis necessary for the formulation of abstract laws" is what gets priority. And so Spence, like La Mettrie and his other ancestors, finds his formalistic solace in whatever can be described in terms of centimeters, grams, and seconds. Anxiety? Can you get a *c-g-s* anxiety?

(2) Secondly, the stimulus. The Silliman Lecturer who preceded Spence was Ragnar Granit, the Swedish neurophysiologist. His lectures were concerned with stimuli and how they operate on organisms, and vice versa. The concept of stimulus comes originally from physiology. The way it is used in S-R theory today is an anachronism. In a word, the modern view is that sense receptors and synaptic centers on the centripetal route are programmed or gated by central states which control more peripheral sensitivity to stimuli and stimulus patterns by a system of control efferents. Indeed, what a stimulus produces depends, to use Lord Adrian's phrase, upon "editing processes" at various removes from the sensory surface. Perhaps the most primitive form of learning—logically as well as genetically—is learning to categorize, transform, and organize sensory inputs. For it is by this learning process that stimuli are achieved and, in a deep sense, that subsequent response is determined. The closest Spence gets to considering this problem is to speak from time to time of "receptor-exposure acts," but the concept is pretty much like



"steadiness-of-aiming-a-camera." So it remains for the neurophysiologists to dirty their hands with the problems of what an S is, and to have their efforts ignored by those S-R psychologists who fear that such inquiries might taint them with phenomenalism. Spence, in commenting on Hull's fondness for physiologizing his hypothetical constructs, says that he too is interested in physiological concepts, provided they are not *ad hoc* and provided they have surplus value beyond their simple invocation. Certainly, Spence might be tempted to move toward an S-S formulation if he looked long and hard at the state of stimulus theory today.

(3) Independent stimulus events and the problem of organization concern us next. One arbitrarily chooses a conditioned stimulus (CS) to link up with an unconditioned stimulus (US)—one out of a set of possible CSs. Having performed this arbitrary choice, what remains is to vary CS-US interval, the magnitude of the US or CS, and so on down the list of variables. One then may study frequency and magnitude of response, latency, speed of running, and the rest. All that is said about the stimulus is that it is of a certain magnitude or duration. In most situations, it is presented with as little else present as possible. If this is all that a behavior theory has to say about the physical world that impinges on an organism, then the behavior theory is doing itself a disservice. For the thing that is interesting about the physical environment is that it is full of redundant features—sequentially, spatially, and formally ordered regularities which organisms learn to accept so that they may respond to specific events as states linked by contingent probabilities to preceding and subsequent states. To learn about specific states independently of the redundant structures in which they are imbedded would so overtax the limited response repertory of any organism as to leave it helpless in the face of an overwhelmingly complex environment. Well, one might say in reply that the organism also learns to respond to the "big Ss" of the environment. Indeed, and by what means? How do I learn that the sequence of numbers 39278124-3729 can best be segmented as powers of 3 and not as an arbitrary string? How do I transform inputs in order to get them

within the compass of my response repertory? Where is the organizer in Spence's system?

(4) Failure to deal with the problem of organization leaves most contemporary behavior theorists dealing with edge details of learning, and this is their privilege, provided they are prepared when others wonder about triviality. Sequential organization for Spence is, as far as this reviewer can tell, "the problem of the length of the chain that can be established in instrumental sequences. . . . One can establish very long instrumental chains. . . ." And so we end with the impossible Markovian problem of how these chains get put together given the number of them that an organism is able to master. They can not *all* be learned, even such simple things as the huge combination of specific routes by which we can find our way about our home cities. They must be generated from some more generic rule that has been learned. About this Spence is in principle silent.

What is the alternative to this rather old-fashioned view of mechanics applied to the analysis of behavior? Other forms of physicalism are available, powerful, and intuitively interesting. Because they are nominalistic in spirit, they are freer of the old injunctions against dealing with any data other than gross mechanical displacements in space-time-force. Like the modern physical tradition, they are concerned with ordering, coding, transforming, evaluating, and representing complex environmental events. If one wishes to use physics as a model, why should we not benefit from the wisdom of that field as it exists today rather than as it existed 300 years ago? There are new and powerful logical-mathematical tools for describing order in events and mapping this order against order in other realms, such as behavior. They give promise, moreover, of a lively next chapter in the ever-recurrent aspiration to make the study of man contiguous with the study of nature.

## Values East, West, and in Between

Charles Morris

**Varieties of Human Value.** Chicago: University of Chicago Press, 1956. Pp. xv + 209. \$5.00.

Reviewed by FRANKLIN FEARING

*Dr. Fearing is Professor of Psychology in the University of California at Los Angeles, a social psychologist converted from physiological psychology. (Remember Reflex Action: A Study in the History of Physiological Psychology, 1930?) He is nowadays concerned with symbols, language, and communication in different cultures, and one cultural institution that he resents is the conventional barrier erected between psychology and anthropology.*

THE larger conceptions of the good life—the "schemata of value" as Gordon Allport has called them—have seemed either so complex and shifting, or so vaguely transcendental as to resist empirical study. Their analysis and dynamics traditionally have been left to the humanist, the professional philos-

opher, or the theologian. In the main the social scientist has avoided them. The psychologist, it is true, has achieved a certain methodological rigor and elegance in the study of such molecular phenomena as motives, attitudes, beliefs, goals, ethical judgments, and the like, all of which are, however, peripheral to the larger problem.

There have been some notable attempts to study values in the global sense. Witness the widely contrasting value patterns identified in various cultures by Ruth Benedict and Margaret Mead, and the democratic and anti-democratic polarities isolated by Adorno, Else Frenkel-Brunswick *et al.* in the study of authoritarian personality. The clinical psychologist has become increasingly aware that, as a matter of therapeutic

strategy, implicitly or explicitly he must commit himself to some broad conception of the good life, and such a shrewd observer as Erich Fromm raises the disturbing question of the universality of the value norms by which mental health and ill health are to be judged.

This is the context within which *Varieties of Human Value* is to be understood. It is no isolated piece of research. For Professor Morris the scientific study of values is seen both as a way of relating the socio-humanistic disciplines to the program of unified science, and as one of the two prerequisites for a general theory of behavior—the other being a theory of signs to which his *Signs, Language and Behavior* (1946) is a contribution. His study of values begins with the publication of his *Paths of Life* in 1942 from which the present investigation stems.

A study of values which is intended to make an empirical contribution to a science of man must take into account the nature and extent of cultural influences. Although anthropologists are not in complete agreement as to its interpretation, there is an impressive amount of evidence indicating that all experience, including values, is partially or wholly culturally determined. The basic requirement of Professor Morris' research is a measuring instrument capable of use across cultural boundaries.

**I**N the present study the basic instrument consisted of thirteen summaries of "ways to live," and the respondents rated their preferences of each Way on a sevenfold scale. The Ways were given no formal labels, but they embody the conceptions of the good life as expressed in various religious and ethical systems. The respondents were approximately 6,000 college students in the United States, Canada, China, India, Japan, and Norway.

The formidable task faced by the respondents in critically evaluating the essential meanings of complex patterns of linguistic symbols may be appreciated if we examine the statement of Way Seven—which is, incidentally, the one most preferred by the U. S. respondents.

Way 7: We should at various times and in various ways accept something from all other paths of life, but give no one our exclusive

allegiance. At one moment one of them is the more appropriate; at another moment another is the most appropriate. Life should contain enjoyment and action and contemplation in about equal amounts. When either is carried to extremes we lose something important in our life. So we must cultivate flexibility, admit diversity in ourselves, accept the tension which this diversity produces, find a place for detachment in the midst of enjoyment and activity. The goal of life is found in the dynamic integration of enjoyment, action, and contemplation, and so in the dynamic interaction of the various paths of life. One should use all of them in building a life, and no one alone.

The original document was in English. Translations were used in China, Japan, and Norway. In the light of current discussions, particularly those of Benjamin Whorf, in the field of psycholinguistics, which emphasize the differences among the linguistic patterns in the world's families of languages and the dominant role played by them in the cognitive-perceptual processes, the translation problem would seem to be crucial. Apparently little attention was given to this, although it was noted that in the Chinese translation of Way Thirteen (the Way widely preferred by Chinese students), the opening sentence had become: "A person should make himself useful." In the English original this sentence was: "A person should let himself be used." This suggests difficulty that deserves more than a passing reference.

One objective of the study was the isolation of the primary value dimensions in a hypothetical value-space. Factor analysis isolated five dimensions which the author labels "Social Restraint and Self-Control," "Enjoyment and Progress in Action," "Withdrawal and Self-Sufficiency," "Receptivity and Sympathetic Concern," and "Self-Indulgence (or Sensuous Enjoyment)." These all appear in the three main cultural samples, a finding that is interpreted to mean that persons in diverse cultures employ five common coordinates in locating the place of conceptions of the good life in value-space.

Professor Morris finds support for the hypothesis that values as reflected in the ratings occur in a field in which there are many variables. He presents evidence that the significant factors in the field were sex, somatotype (Sheldon's seven-point scale), temperament and character



CHARLES MORRIS

(Thurstone's Temperament Schedule, the Allport-Vernon Value Scale, and Cattell's 16 Personality Factor Test), economic status, and size of community in which the respondent was raised. The relative contributions of these factors were not precisely determined. The differences between cultures tended, however, to be larger than variations within a culture.

**T**HE study is impressive both in conception and, with certain reservations, in methodology. The reviewer's reservations are of two sorts. The first has to do with the representativeness of the sample. Professor Morris notes the obvious cultural gaps in the sample, but there arises also the question of the extent to which the values held by college students, drawn mainly from courses in the social sciences and philosophy, represent the values of people in general. It is possible that the Indian and Chinese college students are even less representative than students in the United States. Because of the relatively sophisticated character of the measuring instrument, however, college students or college-trained persons are almost the only individuals possessing the kind of training that would enable them to deal with such material. Professor Morris, of course, is aware of these limitations. Yet the question remains whether, with the use of linguistic instruments, we can ever know the global



values of the vastly greater proportion of the population that do not have this kind of training.

The second reservation is more difficult to formulate. It is presented with some hesitancy since it deals with a field in which Professor Morris is clearly eminent. It has to do with the actual meaning of the linguistic symbols for the respondents. Are they reacting to words or phrases which have a kind of cliché-value in the culture and automatically elicit approval or disapproval, or are they actually appraising (probably for the first time) a total ideological structure? The reliabilities—computed on rather small samples drawn from the U. S. students—

indicate an acceptable degree of stability. But this finding still leaves open the question of *what* it is that is being reacted to. And a closely related problem is the one of the extent to which these complex 'ideas' formulated in English can be translated into a totally different linguistic idiom—Chinese.

This study must not be looked on with condescension or dismissed with niggling criticisms. It was conceived with a sense of the global nature of the problem and carried out with obvious awareness of the difficulties involved. But it faces the hazards that confront all studies across cultures—hazards which Professor Morris has handled with courage and some skill.

metric concepts, methods, and findings; case studies of role-playing and diagnostic sociometry; suggestions on the uses of sociometric methods; developments in sociometric indices and their statistical evaluation; papers on attitude measurement; and sociological and anthropological contributions on social structure.

It is a good book for learning about the sociometric movement and its recent developments. There are in it also some valuable suggestions for the use of sociometric techniques in practice and research. The contributions on sociometric indices and the probability models for evaluating the distribution of choices stand out as among the best in the book. The sociological contributions are relevant in only a strained fashion. Surely sociometry has affected sociology more than these papers would indicate.

One difficulty in assessing sociometry is in deciding just what it is. Moreno wants the term to refer to practically all of group psychology (and sometimes to all of social science), not only for semantic reasons but also for reasons of theoretical and methodological priority and influence. No consensual validation for this position is, however, to be elicited from the majority of persons who do research on group behavior.

The main semantic reason for withholding agreement seems to be the firm identification of sociometry with studies relying primarily on the sociometric test of attractions and repulsions within groups or on any of the other techniques Moreno has invented. And closely connected is another characteristic of sociometric research making for dissociative tendencies, well stated by Moreno himself (p. 16): "A survey of sociometric studies would show this: a drastic lack of imaginative theoretical preparation of an inquiry and a poor presentation of the material data." It is thus understandable that a student of small groups or of group dynamics, one who is concerned with many other properties of group psychology and whose training is well grounded in social psychology, is reluctant to get himself labeled as a technique-oriented sociometrist.

This criticism by Moreno is not so applicable to many of the studies cited by Criswell and Torrance in their able reviews of recent developments in sociom-

## Sociometry in Excelsis

J. L. Moreno (Ed.)

**Sociometry and the Science of Man.** Beacon, N. Y.: Beacon House, 1956. Pp. 474. \$7.50.

Reviewed by BEN WILLERMAN

*Dr. Willerman is an Associate Professor of Psychology who works in the Student Counseling Bureau of the University of Minnesota, where he is conducting a research program on the social psychology of student life. He is a small and big group psychologist. He was one of Kurt Lewin's assistants at Iowa, took his degree at the Massachusetts Institute of Technology, worked in the Survey Research Center at Michigan, now teaches the social psychology of small groups at Minnesota.*

SUBSCRIBERS to *Sociometry* were lucky. At no extra cost, they received this book as the last number of the journal edited by Moreno prior to its transfer to the American Sociological Society. It is a collection of forty-six essays and articles, many previously unpublished, by almost as many different authors who in one way or another made contact with sociometric ideas, methods, or techniques. It can be regarded as a progress report and a record of accomplishment of the sociometric movement and of its influence on other approaches to the study of interpersonal and group psychology.

The greater part of the book is written by persons other than the editor, but the

collection opens with some meditations by him on the considerations which led him to transfer the journal. He decides that sociometry would make more progress if the journal was in other hands. Other papers by him discuss the role of sociometry in the development of social science and his theory of spontaneity and creativity. He regards these phenomena as the problems of psychology. Some aspects of this theory are so speculative as to be untestable, and thus the empirical findings which he cites seem to bear little relation to the theory. Moreno's position seems to be that the creativity which accompanies or characterizes a response in interpersonal relations is not different from that which is present in solving other kinds of problems. If this is so, Moreno's theory could have profited by contact with the technical literature in such areas as motivation, set, and problem-solving.

THE rest of the book contains tributes to the editor's gifted imagination, to his pioneering spirit, and to his inventiveness—by several authors including himself; summaries of the history of the sociometric movement; surveys of socio-

etry and its use in diagnosing problems of group functioning. In the reviewer's opinion these improvements result from the subordination of sociometric methods to theoretical considerations of such phenomena as motivation, need satisfaction, and social perception.

As to the claims of priority, many students, including the reviewer, are more than willing to grant the productive Moreno his deserved position in the Hall of Fame for originating or promulgating a variety of diagnostic and therapeutic techniques, such as the sociometric test, sociogram, role-playing, sociodrama and psychodrama, and certain concepts and indices of group structure. Nehnevajsa's thorough, well-organized, and only slightly partisan historical summary of these contributions leaves little room for doubt on this score.

According to Moreno, however, this already impressive list of innovations is incomplete. Despite his admission that recent developments in the social sciences "have demonstrated 'collective' originality," at times he indirectly suggests that history may credit him with the innovation of systematic small-group research. In reality, without making an intensive search of the literature, one finds that Terman's *experimental* study of leadership in 1904 (which, by the way, any current small-group researcher would be proud to have on his list of publications) included controlled observations of behavior and sociometric-type questions, such as "What one of your schoolmates would you rather be like if you were not yourself?" From other fields, Thrasher's classic study of gangs in 1927 and the Hawthorne research which demonstrated the importance of the work group in setting output standards (Mayo, 1933) may also be cited as occurring at least concurrently with Moreno's scientific studies.

**M**ORENO has affected group psychology, but he overestimates the extent of his influence. Much of small group research stems from the long line of studies by such psychologists as Terman, F. H. Allport (1920), Whittemore (1924), South (1927) and so on through Sherif (1936). Lewin and Lippitt's 1940 pioneer study, in which they manipulated leadership style so as to study its effect



J. L. MORENO

on group behavior, included sociometric tests as a tool for equating the interpersonal relations of the members of the compared groups. But here is where its resemblance to any of the studies reported in *Who Shall Survive* (1934) ends. The systematic and systematically analyzed observations, the rich but close conceptual analysis of cause and effect, the testing of deduction from theory, the incorporation of theories of motivation and action—all characterizing the Lewin-Lippitt study—are only partially present in Moreno's work. It is just not possible to take him seriously when he says (p. 17), "Looking backward, it seems natural that even within the sociometric movement itself, separate cliques should have emerged, trying to identify themselves by different terms like group dynamics in the middle forties, small group research in the early fifties."

Surely, Moreno was, however, one of the first to combine a profound appreciation of the fact that the arrangement of persons in a community could markedly affect them as individuals and the community as a whole with a research program that not only had therapeutic but also scientific aims. Certainly the exaggerated claims and the mystical and religious overtones which at times characterize Moreno's writings should not affect the appreciation of his pre-scientific and scientific contributions.

## Circus and Zoo Behavior

H. Hediger

**Studies of the Psychology and Behaviour of Captive Animals in Zoos and Circuses.** (Trans. by Geoffrey Sircom.) New York: Criterion Books, 1955. Pp. vii + 166. \$6.50.

Reviewed by FRANK A. BEACH

*who is Sterling Professor of Psychology at Yale University and who is the editorial consultant for advising CP on books about animal behavior. This time he recommended himself. The experimental psychologists know him for his research on the effect of hormones on patterns of behavior, especially on sexual behavior, and most of them also know the two books he has written—one of them jointly with C. S. Ford—on these subjects.*

**T**HIS little book by the Director of the Zoological Gardens of Zurich and Titular Professor in Animal Psychology and Biology of Zoological Gardens in the University of Zurich is rich in observations and anecdotes that will both entertain and instruct the comparative psychologist.

Professor Hediger modestly describes his volume as a collection of "casual finds," mere fragments; but he also points out, and proves, that the zoo director and circus trainer have unusual opportunities denied the laboratory experimentalist. Long-term contact with animals of many different and often rare species frequently affords unique insight into the capabilities, foibles, and motivations of the animal world. The author wisely observes that such contact, plus basic zoological training, guards the specialist against overgeneralization across species. He adds the obvious but often overlooked fact that one cannot build a comparative psychology on studies of domestic species alone.

A chapter describing the daily life of wild animals in nature and in captivity emphasizes a point not generally recognized by laboratory psychologists. The dominant need or drive, one that surpasses hunger, thirst, or sex, is the need to avoid or escape from enemies. To this

end the wild animal is constantly alert. Even during sleep the central nervous system 'filters out' the innocuous sensory messages while remaining responsive to danger signals. For example, the sleeping elephant may not awaken when another elephant steps on him, but the sound of a human footstep brings the giant beast to his feet in seconds. The grazing gazelle never feeds for more than a few minutes at a time but must raise its head and inspect the surroundings at frequent intervals.

The successful zoo worker must be familiar with the social habits of his charges. To handle wild animals it is necessary for him to know the rules and ceremonies by which they live in nature. It is often desirable for the human investigator to win membership in the group—a sort of zoomorphism—but in this case he must take care to establish himself as the socially dominant individual.

Life in captivity sometimes brings with it aberrations of the normal behavior pattern. Thus primiparous females of various species often prove to be inefficient mothers. Some species become beggars and 'con' food from human visitors although such behavior is absent in the wild. Nor is it flattering to learn that these panhandlers are invariably mammals. One of the most serious problems of a zoo existence is raised by the fact that animals do not have to find their own food or avoid their natural enemies. The result, according to Professor Hediger, is boredom and listlessness. To counteract this undesirable state of affairs he recommends 'occupational therapy' which involves increasing the opportunities for play in some species, and some form of training or teaching tricks in others.

The book is full of fascinating trivia such as how to raise a baby elephant on a bottle. (Start with the formula, 2 gal. milk and  $\frac{1}{2}$  gal. orange juice!) The mother kangaroo can open and close her pouch at will—a talent which comes in handy when the babies come running to hide from an enemy.

**P**ERHAPS of greatest professional interest to psychologists will be the chapter on training animals to perform tricks. One common method is that of "coercive

intervention," which means forcibly putting the animal through the desired action. If the trainer wants an elephant to raise its hind leg, the first step is to attach a block and tackle and raise the limb mechanically. After a sufficient number of repetitions the animal will perform the act in response to a light tap on the leg.

**I**N training wilder types, such as the big cats, use is made of the animal's fear of man. Each species has its distinctive 'flight distance' and, when this boundary is penetrated by an approaching human being, the animal moves away. By skillful use of this tendency the expert trainer can maneuver a lion or tiger into any desired position such as the top of a pedestal. For this type of training it is best to begin when the animal is still

fairly wild and fearful of man.

A third type of training appears to rest upon what some psychologists would term 'insight.' For instance, according to Hediger, the sea lion must learn to juggle "all at once." Putting the animal through the required act is manifestly impossible, and the trainer cannot produce the activity by use of fright. Success depends upon "the sudden realization of what is required at training."

The value of Professor Hediger's book is increased by the inclusion of 26 excellent photographs, frequently illustrating rather rare subjects such as elephants lying down to sleep, and the occurrence of parturition in the giraffe.

Finally, there is appended a very useful bibliography, including many books and articles unknown to most psychologists but of pertinence to the subject of animal psychology.

## Measurement Without Rigor

G. W. Scott Blair

*Measurements of Mind and Matter.* New York: Philosophical Library, 1956. Pp. 115. \$4.50.

Reviewed by GEORGE H. COLLIER

*Dr. Collier is Assistant Professor of Psychology at the University of Missouri. Originally captured by B. F. Skinner, he was tutored in psychophysics by W. S. Verplanck and polished by W. K. Estes. His chief excitements have been in psychophysics, although just now he is busy frustrating rats experimentally and finding that frustration can be reciprocal.*

**S**OME have limited the domain of science to those areas in which 'exact' measurements can be made. This book questions this view and defends modes of 'measurement' which are not 'exact,' such as one finds, for example, in the author's own area, rheology, and in psychology. The burden of the argument is that the recent history of physics, particularly relativity theory and quantum mechanics, has shown that the nature of physical properties is a matter of definition and thus subject to change. It is proposed that a similar examination of the rules of measurement can and should be made, and that quantities can be de-

fined which satisfy enough of the rules to be useful.

This book may be made difficult for psychologists by the fact that it was written for an audience of doubting physicists (perhaps imaginary), and that it assumes a familiarity with controversies and techniques, particularly dimensional analysis, which are typically not in the psychologists' repertoire. That difficulty is further increased by the book's brevity, which makes many of the arguments enthymematic, and also by the author's tendency to introduce considerations which are irrelevant to the main theme.

In a very brief and elliptic fashion the author reviews the definition of a dimension, the principles of measurement, and the physical theory of measurement. He considers a number of the historical problems, such as the choice of fundamental magnitudes and the 'uncertainty' of measurement, which have led to the relaxation of the classical requirements. He says: a "dimensional symbol must in truth describe not a property . . . , but a



process of measurement."

As illustrations of the areas of measurement which he analyzes, the author presents some work in color-matching, factor analysis, personality theory, and rheology. Measurements in these areas, he notes, may fail of the classical requirements in two ways. They may not meet all of the axioms of order, and they may be dimensionally inhomogeneous.

**T**HE first, and very familiar, objection is met by the equally familiar suggestion that we simply allow 'measures' which meet only part of the axioms of order, nevertheless, to qualify as 'measurements.'

Any variable or quantity has dimensions along which it is measured, i.e., a value of the variable or quantity is determined. In mechanics, for example, all of the variables defined typically have, at most, three dimensions, length (L), mass (M), and time (T). Thus, if the dimensions of the variables are substituted in a function, an equation of dimensional units results, for example,  $s = \frac{1}{2}gt^2$  (law of falling bodies) is equivalent to  $L = LT^{-2}T^2$  or  $L = L$ . The principle of dimensional homogeneity very simply requires that both sides of the function have the same dimensions. This principle is more broadly summarized by the author as "one cannot make direct comparison of magnitude between things which are qualitatively unlike." Stated in another way, the principle is that a relation which holds for one set of units of a variable must hold for all sets of units. Rheological measurements on complex substances sometimes yield stable groupings of magnitudes (variables) which are 'intermediate' between 'dimensionally incompatible prototypes.' For example, in measuring stress and strain in some plastics a quantity, firmness, is found which lies between elasticity ( $ML^{-1}T^{-2}$ ) and viscosity ( $ML^{-1}T^{-1}$ ). The author characterizes such quantities as quasi-properties. In order for these properties to be dimensionally homogeneous, either a new time scale or fractional dimensional exponents (e.g.,  $ML^{-1}T^{-1.5}$ ) have to be introduced. The author chooses the latter course and develops the necessary mathematical methodology (fractional differentiation) in a series of technical papers.

In discussing the implications of these decisions for psychology, the author first seems interested in showing his audience of doubting physicists that psychological measurement is possible; so he exhibits a few samples. Then he shows that some of the principles and problems of measurement in rheology and psychology are the same. He assumes that the dimensions of psychological magnitudes are not the M, L, and T of physics and that most psychological properties are like the quasi-properties which the author defines in rheology. That is to say, they are obtained by "ranking complex entities as lying a certain distance between dimensionally incompatible prototypes." For example, according to the author, one sensation lies between others, or an IQ between idiocy and genius. He argues that, to meet the requirement of dimensional homogeneity, some such device as the fractional dimensional exponents of the quasi-properties should be employed. He gives no examples. This omission is probably the result of the fact that in psychology no examples are possible, since dimensional analysis is itself seldom possible, for the following reasons: In physical theory, there is always a multitude of quantities, but never more than three or four dimensions (e.g., M, L, T), while in psychological theory, on the other hand, there are often as many dimensions as there are variables. A second difficulty for dimensional analysis is that, for many so-called psychological variables, the dimensions cannot or have not been specified.

It seems to the reviewer that the author's analysis of psychological measurement gets bogged down in the philosophical morass of the mind-body problem surrounding psychology, as, for example, in his discussion of the measurement of sensations. Many, if not most, of the problems he discusses would disappear if the principle, which he seems to advocate for physical measurement, were accepted, i.e., that the measuring operations have to meet the axioms of order, not the things that we construct out of them.



*A mathematician who is not also something of a poet will never be a complete mathematician.*

—KARL WEIERSTRASS



## Magister Puerum Condit

Clark E. Moustakas

**The Teacher and the Child:  
Personal Interaction in the  
Classroom.** New York: McGraw-  
Hill, 1956. Pp. xiv + 265. \$4.50.

Reviewed by C. E. MEYERS

*who is Professor of Education in the Department of Educational Psychology and Guidance at the University of Southern California. He once took a doctorate under Lewin at the University of Iowa. He is interested in teaching children, in teaching teachers to teach children, in the development of exceptional children, in how to help deaf babies develop. Condit means founds, puts together, builds, conditions.*

**T**HIS book is meant for teachers and for those who would train or help them. To evaluate it for the psychologist calls for a bit of orientation. Assume that it is impossible for a teacher to have *no* influence on the adjustment of pupils. Assume further that this influence ought to be as wholesome as possible. Accept the fact that there are current enthusiasms for the improvement of teaching which are consciously designed to assist the adjustment of pupils in classrooms, and which are at the same time silent prayers for miracles in the conservation of America's mental health. Then read this book.

Professor Moustakas makes a contribution to that salient of the front known as the child-study program. Most heard about are the 'Prescott' or 'Maryland' groups, but not all programs are under the auspices of the American Council on Education and University of Maryland. Typically such a group of teachers will meet about twice a month for a year or more, each teacher having for homework the cumulation of all possible information on a single pupil in his class. The group discussions by teachers are in part tuitions on objective observing, recording, and prognosticating, but actually have an unannounced greater merit in abreaction. The aim of these discussions is to improve teaching through attention to an understanding of 'the whole child.'

The book at hand is primarily an account of the experiences of ninety-two teachers whom Moustakas guided through study groups, in connection with registration at the Merrill-Palmer School. The book is not a recipe for conducting sessions nor a manual for classroom use of the expressive devices employed. Rather it is an account of how certain teachers found something of personal value through such study. Hence one may say the purpose of the volume is to provide "an opportunity for the individual teacher to experience something creative in his own right through the personal interactions of other teachers and of children."

Of the eight chapters the last five give the major examples of interactions.

The first chapter tells the teacher that the school child is a Kantian-Allportian individual self, to whom all reality is subjective. "Every teacher faces the disturbing problem of helping unhappy, dissatisfied children to adjust in the classroom. Every teacher must in some way handle the variety of emotions that children bring with them to school." To do this well, the teacher must "recognize and appreciate the unique perception of the individual child as expressed in the personal relationship." At its permissive best this relationship allows optimal growth, the 3-Rs included. The teacher must practice seeing with the eyes of the pupil and must accept in advance that being himself a self he is subject to biased perception. It is an avowedly Adlerian chapter in the language of which the proper positivist will find want of discipline and of operationism. But the point of view is clear.

The next two chapters (which in part re-state some of the author's earlier publications) show that normal emotional development compares to that expressed in the therapy room, and that the utterances in therapy are comparable to those in the classroom with the permissive teacher. Here Moustakas takes the calculated risk of being mistaken for advocating 'therapy' by teachers, but such would be the reader's, not the author's sin.

The bulk of pages and of contribution lie in the five chapters which present the selected instances of pupil careers through a school year. Over and above the observation and report of the typical study



CLARK E. MOUSTAKAS

group, these teachers explored with their pupils the joys and pains of free expressive periods, with group fantasy and drawing, kangaroo courts and role-playing, autobiography and confession. The accounts by the teachers were enriched through liberal tape recordings. Apparently, too, the teachers were well coached in the nondirective process, judging from the abundant Mm-hmms and other Rogerian leads.

The presentation of the individual careers is excellent. Each begins with the teacher's initial concern with hostility, withdrawal, or some other deviation and is then carried through until year's end. Each is a story in itself, and the reader is not lost for there is little jumping from case to case to make a point. Rather the careers were selected to give variety at levels of education that range from kindergarten through high school. The use of transcriptions from the tape greatly enriches this kind of material, for both credibility and dramatic force are favored by verbatim lines.

Of what value this volume? It is

beside the point to remark that a clinician might abhor the resemblance to therapy (his own sin, remember) or regret the lack of interpretation in depth (which would be lost on most teachers). Those who can use these lines will discover their own experiences of success and failure with pupils and will relive moments of hostility and saintly patience with children and parents. Some principals will contrive to let a few mothers happen to look at the middle chapters. Professors will give readings in classes to cadet teachers. Anyone who remembers his own classrooms will enjoy the vignettes of pupil-pupil and pupil-teacher interplay.

As to the basic procedure of the child-study group, it has been well-enough established now that it does more than a bit of good. (See, for example, the recently published *Monograph*, 21, no. 1 of the Society for Research in Child Development.) What Moustakas (and others such as Ojemann and Bullis) add in favor of the intentional eliciting of expression may be on more sensitive ground. To his credit Moustakas never mentions therapy, never mentions interpretation, and warns that no new worlds are promised. "As yet we do not know how pervasive and lasting personality changes are which occur even in psychoanalytic . . . therapy." Two-thirds of his teachers believed good came of this experience; no mention is made of harm. The whole of the last chapter is devoted to instances of uncertain success and of failure to improve relationship.

A more serious concern may be expressed for some of the 'reflecting responses' used by teachers. One wonders if some of the 'mm-hmms' ought to be 'uh-uhs,' for, when an authority figure says, "You feel like chopping his head off," he may reinforce a symptomatic attitude more than he relieves it by ventilation. That issue, however, lies deeper in personality theory than is the concern of this review.



*If you treat an individual as he is, he will stay as he is, but if you treat him as if he were what he ought to be and could be, he will become what he ought to be and could be.*

—JOHANN WOLFGANG VON GOETHE



# CP SPEAKS . . .

WHEN do words get on their own and when are they still tied to their author's apron strings? The turtle lays her eggs in the sand, the warm sun publishes them, and the little turtles, with only their genes for a superego, know enough not to go to the hinterland but struggle properly toward the water with no word from mother. Can a book or a book review do as well? Poetry can. You do not need to know the name or the person of the poet who is pleasing you. Logic can. A mathematical proof stands more firmly on its own feet than does a baby turtle. Yet even in these instances—esthetics and logic—the wise reader likes to enrich the context of his understanding by knowing the author. Is Schumann ever Beethoven? Is not this strain of victory-in-defeat more meaningful when you know that Browning wrote the poem? Surely this dry humor gains a bonus of wit when you know that it was Will Rogers who said it. And then there is the elegant mathematical proof. Elegance may not improve logic but it does improve reading, enhance interest, and facilitate memory; and immediately is the appreciation of deductive elegance followed by the question, "Who did it?"

Usually the author wishes his verbal progeny to bear his name. Start a movement—there was one such in Paris twenty-five years ago—start a movement for having all books published anonymously, and how far would you get—with most authors or, for that matter, with their publishers? Not far in general; yet there is a great deal of writing for which the authors have sought obscurity asonyms or behind pseudonyms. That the readers are not gratified by this secrecy is witnessed by the compilation of the various dictionaries of anonyma and pseudonyma which reveal the suppressed genesis. Sometimes the author would like to be recognized but is held back by modesty. The book that identifies 151 of more than a thousand femi-

nine pseudonyms of the nineteenth century, where the signature is simply "By a Lady," remarks that these ladies often liked to be led out by an investigator from an obscurity imposed upon them by Victorian convention. Yet modesty may be genuine in a young author and fear of unsuccess may be even greater; so Samuel L. Clemens at first hid beyond the pseudonymous Mark Twain and then much later sued for infringement of his special trademark when another author tried to shine, as it were, from behind the same cloak. Charles L. Dodson wanted to keep his character as a mathematician clear when he chose to be Lewis Carroll in the *Alice* books, so no wonder Queen Victoria was surprised when she asked to see his other works and received a copy of *Euclid and His Modern Rivals*.

Pseudonyms are often used as wit or else to identify an author within the circle of an élite. They and anonymity are also used for protection of the author in personal attack, so common in England in the eighteenth century and earlier. Presently Parliament brought this scurrilous pamphleteering under the libel law, and the vicious critics could no longer take refuge behind a practice that was for many other distinguished writers good clean fun. If there is a good discussion of the motives for anonymity and pseudonymity, *CP* does not know where it is; but it is clear that modesty, insecurity, conventionality, private pride, in-group pride, wit, cowardice, ire, or venom may, any one of them, get an author into a dictionary of anonyma and pseudonyma. Pseudonymous writing is usually autistic, seldom altruistic, and it is doubtful whether an author ever pleases a reader (except within an élite) by using a pseudonym, at least until the pen name has established itself as a personality, revealing identity more than it obscures.

Izaak Walton is said to have suggested that anonymity in publication would fix

the reader's attention upon the text and not upon the irrelevant personality of the author. An odd place to find this comment when the *Compleat Angler* is almost as much a personality as a book, although its esthetic quality means that a pseudonym might have served as well. If science were all of the if-a-then-b character, it might indeed give up explicit authorship, but only a very little science is so tight. Imagine, if you can, a history of science that mentions no names of scientists or that finds progress and its inhibition independent of the personalities involved. And then try to imagine the scientific journals filled only with anonymous articles, with the locus of responsibility indeterminate. The picture does not make sense. Research is personal and so must be the books about the results of research, and the reviews of the books. From psychophysics to psychotherapy it is important to know what attitudes in respect of theory influence the plan of work and determine the choice of fact that informs the conclusion.

And what holds for the report of research holds even more surely for criticism, for the book reviews. One of America's distinguished editor-psychologists—a man of sagacity and broad experience who shall nevertheless remain anonymous—has recently suggested that *CP* would be a better journal if all its reviews were published anonymously. In that he has the example of the *Literary Supplement* of the *London Times*; yet not quite, for this is the tradition, especially strong in England, of the cognoscenti, the literary élite, who know the English styles, the cognitive manners and the attitudinal biases of the important critics who asonyms remain masked, yet not wholly hidden. Should science learn in this respect from literature or does it prefer not to guess when fact is available?

At any rate *CP* has during the present year moved in the opposite direction. Its readers were complaining that they had never heard of most of the reviewers; so would not *CP* introduce the reviewers to the readers? Just now *CP* is trying that out, and the Izaak Waltons may soon be writing in their protests. Yet *CP* thinks they will not. People are interested in people. Anonymity was never invented to please the reader. And dull writing



can sometimes become interesting when it is made personal. *CP* wishes to be interesting and thinks that nearly all of its readers want to know who its reviewers are.

The argument for anonymity is that anonymous reviews would be more objective. This suggestion seems to imply, if not a lack of integrity on the part of the anonymous reviewer, at least a lack of courage, whereas there is surely something to be said on the other side of such an asymmetrical contention. *CP* gets letters enough from authors who feel wronged by reviewers who have been, let us say, too courageous, and *CP*'s Editor thinks he detects in the *Zeitgeist* a belief that psychologists feel enough protected in print to venture caustic criticism that they would never utter in a face-to-face situation. At any rate criticism needs to be responsible, and *CP* knows of no way to come near fixing responsibility other than by specifying, as surely as it can, an author or a reviewer as an identifiable person, a biological organism with enduring attitudes and attributes.

More than that, if *CP*'s reviews were anonymous, then its Editor would find he had assumed responsibility for the fairness, integrity, and good judgment of a couple of hundred reviewers, an accountability far in excess of his capabilities; and he would be, moreover, if he remained free to accept and reject reviews, in a position of power that ought to be intolerable to the community that he serves and also to himself.

Nevertheless *CP* offers to depart from this rule of universal onymity by printing in *ON THE OTHER HAND* anonymous letters favoring anonymous reviews, provided only that the unknown writer adhere strictly to the expository form of if-*a*-then-*b* or write in poetry at a hedonistic level equivalent at least to Ogden Nash's.

OF GREAT interest to scholars in the field of psychoanalysis," writes Dr. Robert W. White because *CP* asked him, "will be the projected five-volume *Index of Psycho-Analytic Writings* by Alexander Grinstein, of which the first volume (Aall-Freud) has already appeared (International Universities Press, 1956). Although the set will cost \$75.00, it will

be an indispensable aid for serious scholarship. Years ago Dr. John Rickman compiled the *Index Psychoanalyticus*, 1893-1926. This new undertaking continues that endeavor to the present. The first volume alone contains 10,714 titles. A subject index will be provided. The works of a few 'greats' are listed chronologically in an appendix—in this volume Abraham, Ferenczi, and Freud. All titles are given in the original language and then translated into English, 'since this has become the predominant language of psychoanalysis.'"

DR. LEONARD MEAD, at *CP*'s request, makes the following comment:

"A dilemma facing the engineering psychologist is the wide scattering of bibliographic source material in the specialty of human engineering. McCollum's and Chapanis' *A Human Engineering Bibliography* (San Diego, Calif. State College Foundation; pp. viii + 128) provides an extremely useful collation of almost 6,000 categorized references pertinent to the problems of human factors in the design and use of machines. Many of the citations are to government reports which have never appeared in the open professional literature. Having been made aware of the existence of an article, the civilian human engineer will still have difficulties finding a library which has it. Except for this problem the work is a definite augmentation to the very few existing texts and handbooks in the field."

JOHN WILEY have just celebrated their sesqui (1807-1957) with a handsome volume (242 pp.), in which H. S. Langfeld writes the eight-page chapter on psychology—*The Realm of Behavior*, he says, dropping into the unesqui jargon of the 1950s. Wiley got out three books on memotechnics and phrenology in the

1840s, but otherwise their history in psychology began in 1935 with the publication of the first Boring-Langfeld-Weld textbook. In the last twenty-three years (1935-1957) they have published 48 books on psychology if you count three revisions, an average of two per annum—six in 1949, none in three years, but in general keeping pretty close to the average. The better known authors—26 of them besides BLW—are F. H. Allport, J. S. Bruner, Hadley Cantril, Leonard Carmichael, Alphonse Chapanis, W. R. Garner, F. A. Geldard, Harold Gulliksen, C. S. Hall, D. O. Hebb, L. A. Jeffress, J. G. Jenkins, Gardner Lindzey, Quinn McNemar, N. R. F. Maier, J. G. Miller, Frederick Mosteller, C. T. Morgan, Anne Roe, Muzafer Sherif, M. B. Smith, S. S. Stevens, R. L. Thorndike, E. G. Wever, R. W. White, P. T. Young—an illustrious crew and all except Jenkins still alive.

UNDER the title *Freudiana* (Cambridge, Mass.: Sci-Art Publishers, 1957) A. A. Roback has just published a book upon which *CP*'s Consultant, Robert W. White, comments (at *CP*'s request) as follows: "Roback sets forth his correspondence with Freud, 1929 to 1939, consisting of thirteen letters by Roback and six by Freud, with brief excerpts from several more. The volume also contains reviews of some of Freud's later writings and includes a stormy controversy with Jelliffe. Roback makes no effort to conceal his missteps in dealing with his famous correspondent. For instance, he had Freud's handwriting analyzed 'blind' by Saudek, and then submitted the analysis 'for validation' to the author of the writing, who in his next letter pronounced it a 'sorry joke.' Freud's tone in these letters is perhaps unusually reproving, but otherwise the now familiar lineaments of his personality emerge again."

E. G. B.

*The difference is slight, to the influence of an author, whether he is read by five hundred readers, or by five thousand; if he can select the five hundred, he reaches the five thousand.*

—HENRY ADAMS

# Leadership Is Democratic

**Donald A. Laird and Eleanor C. Laird**

**The New Psychology for Leadership.** New York: McGraw-Hill, 1956. Pp. 226. \$4.00.

Reviewed by HAROLD A. EDGERTON

*who has for the last ten years been Vice-President of Richardson, Bellows, Henry and Company, industrial psychologists and management consultants. In this position he is responsible for the design and direction of research in the field of human relations in industrial, military, and business organizations. He is a past-president of the Psychometric Society and of the Division of Business and Industrial Psychology of the American Psychological Association.*

THIS interesting book by the Lairds is in many ways a picture of one of the more major changes in our society as a whole taken over the past half-century, rather than just a picture of change in the industrial and business climate. It is a recognition of change in the work climate, in worker attitudes, and in the roles of the worker and leader in industry.

The volume describes experimental and situational studies in our society which may be classified along a continuum from autocratic to democratic, from the organization completely controlled by one individual to the organization controlled entirely by group action. I do not believe that our society can accept the completely democratic concept in terms of industrial organization or in terms of teams for accomplishing such goals as we find in business and industry; rather this volume constitutes a look at the effective patterns of group action in a society where the individual is something more than a commodity, a pair of hands or a machine. It pays considerable attention to the importance of the leader, to the qualities of leadership from the points of view both of productivity and of morale and cooperativeness in the non-leader segment of the group. It is interesting to note that the evidence supports a greater effectiveness in performance when there is a leader present and functioning than where the situation is not

structured by having a leader.

The discussion of cues for leaders is of particular interest. Cues to which the workers respond are described, as well as those to which the leaders respond, and within both groups are noted those which are given both intentionally and unintentionally. All in all, the book is a very good review of the literature on the psychology of leadership, bringing together in a usable and interesting form the various studies of leadership which have appeared in the literature in the past five to ten years.

The reviewer liked particularly well the chapter summaries given at the end of

each chapter. It might be more effective, however, if these summaries appeared at the beginning of each chapter. Such arrangement allows for a more rapid skimming of the text, with the balance of the chapter giving the support from which these summary statements have been drawn. Most readers of this book would, I believe, get more from it by such an arrangement.

This book could be very useful in training programs for people having supervisory and managerial responsibilities in business and industry, in government, in schools, and in community and civic groups.

## The Nurse's Patient

**Theresa G. Muller**

**The Foundations of Human Behavior: Dynamic Psychology in Nursing.** New York: G. P. Putnam's Sons, 1956. Pp. 254. \$4.50.

Reviewed by HELEN NAHM

*Dr. Nahm is Director of the Division of Nursing Education of the National League for Nursing at 2 Park Avenue, New York City. She has been director in various schools of nursing for the last twenty years.*

THIS book has the objective of giving students in nursing a foundation for understanding the dynamics of human behavior. It was written out of a wealth of experience accumulated by the author in working with students and patients over a long period of years and in many different settings.

Part I includes a definition and brief history of dynamic psychology, Part II focuses on the forces which propel human beings to seek satisfaction of their biological and social needs, Part III includes a discussion of habits, attitudes, interests, successes and failures, and their relationship to effective intercommunication and the development of emotional maturity, and Part IV presents the genesis and evolution of emotional development and the physiological and social effects of emotional reactions.

Throughout the book there are accounts of personal experiences of former nursing students in meeting and reacting to problem situations, as well as brief case studies and reproductions of group discussions centered around topics such

as dependence-independence, relation to authority, and the process of achieving insight. Because of their relevance to situations constantly faced by nursing students, they should be of value in helping the students to analyze their own personal experiences in nursing, and to become aware of the effect of their own reactions on patients and others. The entire book is focused on the dynamic quality of the setting in which nurses find themselves, the tremendous need for each person to become aware of her own part in the total setting, the danger of leaning on a stereotyped role which gives security and a certain prestige, and the importance of achieving self-understanding and emotional maturity.

In contrast with previously written books on psychology for nurses which usually resemble abbreviated textbooks in general psychology, with paragraphs interspersed on applications of such psychology to nursing, Miss Muller's book presents a fresh and stimulating approach. For students with little or no background in general psychology its effective use will depend to a considerable extent on the skill and understanding of the teacher. For students and others with some background in psychology it is readable and interesting.

# Muslim-Hindu Tension

**Pars Ram**

**A UNESCO Study of Social Tensions in Aligarh, 1950-1951.** (Ed. with an Introduction by Gardner Murphy.) Ahmedabad, India: New Order Book Co., 1955. Pp. xv + 206. Rs. 5-8-0 (paper); 8-0-0 (cloth).

*Reviewed by* RAGNAR ROMMETVEIT

*who is Docent in Psychology in the University of Oslo, but just at present a visiting professor in the Department of Psychology and the Laboratory for Research in Social Relations at the University of Minnesota. He is the author of Social Norms and Roles, 1955. In 1951-54 he was associated with the social surveys and group experiments conducted in seven European countries by the Organization for Comparative Social Research, acting as coordinator of the experimental group projects in the last year.*

THIS is a report on a UNESCO study of the Hindu-Muslim conflict in India, based upon an investigation carried out in a predominantly Hindu city with an influential Muslim minority. The purpose of the study is, in Professor Ram's own words, to find out "what weighs on the mental horizon of an ordinary Hindu and an ordinary Muslim which makes for Hindu-Muslim hostility." The empirical investigations comprise analyses of certain historical, economic, sociological, and political conditions, intensive studies of specific crises and episodes involving tensions in 1950-1951, examination of rumors related to Hindu-Muslim conflicts, and prolonged interviews with Muslims and Hindus.

This methodologically eclectic approach is in harmony with the author's broad orientation and clear recognition of the immense complexity of the problems under investigation. His aim is a tentative diagnosis, and his theoretical framework is presented as an attempt at verbalizing certain "half-conscious and half-unconscious suppositions." When verbalized, however, these "suppositions"

tend to converge in an effort at integrating elements of psychoanalytic theory and social psychological points of view. The search for the roots of Hindu-Muslim conflict is thus in part guided by a frustration-aggression hypothesis: Frustration of "survival needs" leads to autistic self-other perceptions, and the resultant "inability to look at others as they look upon themselves" is in turn responsible for hostile attitudes. In spite of approximately identical economic conditions, however, the Muslim interviewees seem to reflect considerably more insecurity, pessimism, and feelings of persecution than do the Hindus. For instance, the unemployed Muslim refers to his own unfortunate situation as a proof of Hindu persecution, whereas the unemployed Hindu worker does not tend to build up rejection fantasies of such a kind.

When trying to explain these findings, Professor Ram refers to certain crucial social factors. Since the withdrawal of the British regime, Muslims have been deprived of certain specific privileges. Also, the average Muslim has the opportunity to migrate to Pakistan. In terms of *relative deprivation*, therefore, when comparing his present situation with the state of his affairs in the British period, and with that of a successful acquaintance in Pakistan, the average Muslim is *subjectively* in a less favorable situation than a Hindu who suffers the same deprivation. In addition, the alternative of migration to Pakistan makes for less commitment to certain political movements and less identification with them. The Hindu recognizes this situation as an improvement in the present conditions.

Sometimes the psychoanalytic interpretations of this volume seem rather farfetched, as, for instance, in a description of the historical development of Hindu-Muslim conflicts in terms of psychoanalytic metaphors. It remains to be said, however, that Professor Ram had not finished the manuscript when he suddenly died in 1952, and some of these chapters are really written in the fashion of progress reports, with detailed tables of results which might well have been considerably abbreviated and condensed. The editor preferred to publish the manuscript without any essential revisions and changes. Instead of a nicely brushed-up final research report, therefore, we get a book which provides us with a vivid im-

pression of an imaginative and broad-minded psychologist *at work* in the analysis of tremendously complex and profoundly important human problems.

Citizens of Aligarh, who were antagonistic toward the UNESCO team, described the whole project as a waste of public funds. If any reader should happen to agree with them because of the meager contributions to basic theory by studies of this kind, I need simply refer to Professor Ram's comments on the report as a whole:

"This report is not a piece of research," he says, "because no hypothesis about Hindu-Muslim conflict has been carefully tested in a scientific way to correct errors of conception. Yet the data collected compel the formulation of Hindu-Muslim problems in a new way, and, if the formulation of a problem in a new way is also research, this report can be claimed as a piece of research."

## Facts About Sex Offenses

**Albert Ellis and Ralph Brancale,**  
with the collaboration of **Ruth R. Doorbar**

**The Psychology of Sex-Offenders.** Springfield, Ill.: Charles C Thomas, 1956. Pp. vii + 132. \$3.75.

*Reviewed by* LOUIS D. COHEN

*who is Associate Professor of Psychology and also of Medical Psychology at Duke University and Chief Psychologist at the Duke Hospital. He has had a great deal of responsibility for examining prisoners and sex offenders in correctional institutions in New York City and later in Indiana, where he came into professional contact with Dr. Alfred C. Kinsey. After that he worked along the same lines for the Adjutant General of the U. S. Army until he went to Duke a decade ago.*

THE paucity of studies providing a scientific basis for caring for and treating sex offenders has concerned at least three legislative committees (California, Michigan, New Jersey). Thus any research report, like Ellis and Brancale's



that promises to add to the monumental pioneering work of Kinsey and his associates, is greeted eagerly.

This report on 300 consecutive male sex offenders admitted to the New Jersey Diagnostic Center at a time when all convicted sex offenders in New Jersey were required to be studied at the Center, offers us a 100 per cent sample of the class-sex offender in New Jersey. The authors hope to generalize their conclusions to a larger group, but they recognize the limitations imposed on generalizations about behavior when the complex process of detection, arrest, trial and conviction precedes the establishment of the defined group—sex offender. Thus, while they take issue with others about generalizing from more limited studies, they themselves are torn between a wish to generalize from their own data and their recognition that such generalization may well be unwarranted.

Ellis and Brancale have tried to deal systematically with the data of their psychological and psychiatric examinations, considering it in relation to a series of statements (called *hypotheses*) culled from some recent relevant studies. Their study contributes information that reinforces the conclusions about the "harmless" character of the sex behavior of large numbers of offenders, and about the high probability of repeated legal offenses by the group whether convicted or not. It shows that sex offenders are a diverse group which includes some who are "psychiatrically ill" and many who are not, and that in large measure these sex offenders were "sexually inhibited and constricted rather than over-impulsive and over-sexed individuals."

Other statements, (also called *hypotheses*) regarding legal practices in the handling of sex offenders or about the efficiency of psychiatric classification of sex offenders and sexual behavior, give the authors an opportunity to express their opinions about current legal procedures and the appropriateness of psychiatric diagnostic criteria.

For the psychologist reader probably the most tantalizing deficiency of the book is its use of such evaluative terms as *emotional immaturity*, *basic hostility*, and *severe emotional deprivation*, without any elaboration, either in the text or in the appendices, of the criteria for them. Nor are control groups referred to when

the authors consider the extent of these behavioral characteristics in the population of sex offenders. We can regret too the authors' failure to test the reliability of some of the differences they report so that stability of differences may be evaluated; nor are the data presented in such form that the reader can, if he

wishes, make the computations himself.

Thus some of the opportunity for providing additional soundly worked-through data on this complex behavioral area may have been missed. It is to be hoped that more detailed analyses of the data and elaboration of the criteria used can be made available at some later date.

## Horatio Alger Rides Again

W. Lloyd Warner and James Abegglen

**Big Business Leaders in America.** New York: Harper & Brothers, 1955. Pp. 243. \$3.75.

Reviewed by ANNE ROE

*Dr. Roe is perhaps best known nowadays for her studies of the psychology of eminent scientists, The Making of a Scientist, 1953. She has been involved in research in clinical psychology and in the psychology of occupations and vocations, and is right now president-elect of the Division of Clinical and Abnormal Psychology of the American Psychological Association.*

THESE two authors have made a study of America's top executives, who they are, where they came from, how they got that way and whom they married. This is a nontechnical condensation of the technical report (Warner and Abegglen, *Occupational Mobility in American Business and Industry*, 1928-1952, University of Minnesota Press, 1955), and, in addition, includes personality studies of some of the business men and their wives, which are not reported in the technical volume.

Details on sampling and methodology of interest to psychologists who worry about the criterion problem are given only in the technical report, but noted briefly here. The study was designed to repeat that of Taussig and Joslyn of 1928; hence the questionnaire used is comparable. The subjects are the executive officers of firms so selected that types of business appeared in the same proportion as their contribution to the national income. There were 17,546 four-page questionnaires mailed out, and 8,562 were returned, 262 unusable. There is, moreover, adequate evidence that the returns were representative.

The authors' major concern seems to

have been the determination of whether or not the 'American Dream' of equal opportunity and open classes has any reality. They conclude from their examination of long-range trends, including educational ones, that the dream has a sound basis in facts, that Horatio Alger is not just a myth, and that, while marrying the boss' daughter may speed things up, it is not the only way to get ahead.

The family backgrounds of their group contrast strongly with those of eminent scientists. Fathers of the business élite were: 52% owners or executives, 14% professional men, 15% laborers. For scientists these figures are 31%, 53% and 0%. Warner and Abegglen feel that sons of laborers are still somewhat discriminated against, since the total percentage in the population is much higher. But, if one makes the not unreasonable assumption that an IQ of 104 would be minimal for a man who became one of the business élite, it can be estimated that not more than 7% of their group could reasonably be expected to come from laboring groups, all else being equal.

The authors do discuss effects of differences in education but never mention possible differences in ability. Their technical report does, indeed, just mention the matter of ability but immediately dismisses it with the statement that the most tenable hypothesis sociologically is that genetic differences on a class basis do not exist. The study that they cite does, indeed, demonstrate that performance differences on a class basis exist. Whether these differences are

genetic or not, it would seem that they must be taken into account. My own comment is that being a big business executive is a very visible ideal for any young man in our culture, even though its realization is not supposed to be easy, that lip service to the American Dream has helped to promote the reality, and that the large contribution from laboring backgrounds demonstrates not only the importance of motivation, but the existence of open classes, at least for whites.

Much of the book is devoted to a discussion of the private worlds of the business elite and their wives, based upon interviews and thematic apperception tests (TAT) of an unspecified number of subjects, selected in an unknown way. What psychologist gave and interpreted these TATs is another mystery. Psychologists will be both intrigued and irritated by these pages. There are many good and significant observations: the role of the mother in the mobile elite; emotional costs of mobility and social status; the contrast in the social roles of the birth elite and the mobile elite. But there are no indications of how representative the persons analyzed are of the groups as a whole, nothing really to get your teeth into, nothing to permit good comparisons with other groups, and no technical report to refer to.

Among the mobile elite discussed, there is considerable emphasis on the ability to become detached from parents and from other persons. Henry also noticed this in his studies of business executives and my natural scientists showed it. It is not clear whether this is also true of the birth elite; the comparison would be of some interest.

There seem to be all possibilities exemplified in the personalities of the wives and in the marriage pattern. There are men who married above them and worked up; men who married in their own group of origin, and whose wives did or did not keep up with them, or adapted in various different ways. The most common role for the wife is that of one heavily engaged in civic affairs and social life, the rarest that of the career woman. The picture is not too different from that of wives of eminent scientists.

The major factor in these careers, as in those of eminent scientists and artists, is the strength of their motivation and the degree of their absorption in the job.

## Relating Evaluation to Instruction

Georgia Sachs Adams and Theodore L. Torgerson

**Measurement and Evaluation for the Secondary-School Teacher.**  
New York: Dryden Press, 1956. Pp. xiii + 658. \$5.75.

Reviewed by WALTER F. JOHNSON

*Dr. Johnson is Professor of Guidance in the College of Education of Michigan State University, where he has also been counselor trainer for the past nine years. He is a Diplomate in Counseling Psychology and is involved with the administration of counseling and guidance in many different ways.*

THE authors of this volume suggest that a new and fresh approach to understanding concepts of measurement and evaluation has been presented. Although comparison of the book with others written on the same subject reveals nothing profoundly new, there is, nevertheless, different emphasis in the treatment of the subject matter. The authors believe that the following points represent a departure from earlier textbooks on evaluation.

1. They place emphasis upon the student and his problem, presenting the techniques of measurement as methods of studying and solving these problems.
2. They feel that understandings and techniques in this field must be made an integral part of teaching process and develop the topics covered accordingly.
3. They present measurement and evaluation as aids in preventing serious learning difficulties as well as in correcting those which exist.
4. They provide an opportunity to learn by doing, through the application of both formal and informal techniques in the solution of practical problems included in each chapter.

Perusal of the book indicates that the authors have made a conscientious attempt to write for the classroom teacher. They make generous use of examples and applications that stem from the classroom. There is ample evidence that they possess an integral knowledge of educa-

tional problems at the secondary level, and they have made a conscientious attempt to relate fundamentals and application by introducing the various topics with some of the basic principles and by defining, in some way at least, most of the numerous terms which are the jargon of this field. From time to time, however, they lapse into the use of technical terms which are not developed or explained sufficiently to give the unsophisticated reader the level of understanding necessary if he is to conceptualize or apply them properly. The fact that the authors have not been uniformly successful in their efforts to bridge the gap between theory and practice in a single comprehensive text does not constitute a serious criticism of this book, as compared with others written with the same purpose; yet the instructor will find that he has a responsibility for covering the basic material that is not sufficiently developed in the book.

IN the opinion of the reviewer the book is a noteworthy contribution to the field of measurement and evaluation in a number of ways. It is an excellent reference for on-the-job use (especially Part 2, *The Study of Individuals*, and Part 3, *The Improvement of Instruction*). It will be a satisfactory text for course instruction, if the instructor provides additional theoretical and technical background material. The coverage given to the more informal techniques of evaluation is particularly good. Some users may prefer to follow a different pattern of organization of the subject-matter; others may feel that the book is encyclopedic; but, generally speaking, the book should meet with favor among instructors and students, teachers, and counselors.

# The Painful Theory of Laughter

Edmund Bergler

**Laughter and the Sense of Humor.** New York: Intercontinental Medical Book Corp. and Grune & Stratton, 1956. Pp. xii + 297. \$5.00.

Reviewed by ROSS STAGNER

*who is professor in the Department of Psychology and the Institute of Labor and Industrial Relations at the University of Illinois, and who recently reviewed for CP McCary's Psychology of Personality. He is interested in all sorts of things, but his competence in the psychology of personality gives him a right to assess a psychoanalyst's conception of the dynamics of laughing.*

EDMUND BERGLER has been one of the most prolific (and literate) of psychoanalytic authors. Some of his contributions (*The Basic Neurosis*, *Neurotic Counterfeit-Sex*) have made significant impacts on American psychological thinking. I am afraid the present volume will not add to his stature in either the theoretical or the literary realm.

Humor, says Bergler, is inherently an expression of *psychic masochism*, a concept which he has stressed cogently in other publications. Unfortunately, in his efforts to be systematic and internally consistent in his theory, he strains his interpretations to a point of no return—at least, no return to the reader patiently trying to follow the argument. Perhaps it is natural for theorists to look for monistic, monolithic solutions; but at times the pluralistic approach seems much more plausible. Psychoanalysts, of all people, ought to know that a given response may function in service of many drives, many emotions, many defense mechanisms. Why, then, must all humor derive from psychic masochism? Perhaps this compulsion derives from the subject-matter; but I am inclined to think that it derives from the personality of the author. (Since Dr. Bergler uses this same argument against some of the theorists he criticizes, he surely will not complain if it is directed toward him.)

The basic premise is that humor is a

means of attacking other people (a point on which most of us will certainly agree as regards a great deal of joking), but—and this is essential to Bergler's view—the victims of the attack are merely substitutes for an attack on oneself. Each of us experiences guilt because of failure to live up to adult or societal demands. Humor is a defense against this unconscious guilt. "The unending battle with too-lofty internal models," he writes, "reduces, for a short moment which is exactly identical with the duration of laughter, the human being's fears and dilemmas." At other points he shows an awareness of the possible multiplicity of factors involved in laughter and humor. "It is a mistake to assume that symbols, because they are similar, have identical meanings," he comments in discussing Negro laughter. He ignores, however, the contradiction between this point and his

major thesis.

Bergler's style in this book is somewhat more ponderous and pontifical than usual. He also engages distressingly often in the tortuous and involved arguments by which anything can be proved to be related to anything else, a technique used so often by the orthodox Freudians. For example, he explains mother-in-law jokes by commenting, "In addition to all its other meanings, marriage also signifies an unconscious attestation of rebellion against involuntary submission to the image of mother." Apparently there never is such a phenomenon as a truly adult marriage; in fact, from reading this book one would conclude that there never is a truly adult personality.

Is laughter an expression of psychic masochism? The careful reading of this book may indeed be limited to the psychic masochists, but will they laugh?



## Crime and Punishment and Psychiatry

Henry Weihofen

**The Urge to Punish: New Approaches to the Problems of Mental Irresponsibility for Crime.** New York: Farrar, Straus and Cudahy, 1956. Pp. vi + 213. \$4.00.

Reviewed by GERALD S. BLUM

*who is Associate Professor of Psychology at the University of Michigan, as well as a Consultant in Clinical Psychology in the Veterans Administration. He is the author of Psychoanalytic Theories of Personality (1953) and, at the present time, is involved in experimental research on psychoanalytic behavior theory and in the elaboration of a conceptual model for behavior theory.*

THIS small volume is based on a series of lectures originally delivered by Weihofen at Temple University when he received the Isaac Ray Award in 1952. This award is bestowed annually by the American Psychiatric Association upon the person deemed "most worthy by reason of his contribution to the improvement of the relations of law and psychiatry."

The subject of the book is the assessment of mental irresponsibility for crime,

a topic that the author treats in a highly penetrating, incisive, and often fascinating fashion. Himself a professor of law at the University of New Mexico, he takes his legal brethren to task for the ineffectual way in which the problem has been handled for centuries, down to and including the current efforts of the American Law Institute to draft a Model Penal Code. He berates the traditional tests for "knowledge of right from wrong" and "irresistible impulse" used to decide upon responsibility. He advocates instead the "product rule" that a defendant will be held irresponsible if his criminal act was the product of mental disease or defect.

To the lawyers' criticism that the product rule is too vague, he replies by accusing them in turn of an irrational reverence for certainty. The true virtue, he asserts, is flexibility; psychiatrists



must be allowed freedom to make use of the best guides currently available to them for determining responsibility. He expresses much compassion for the testifying psychiatrist, harassed by judge and attorney alike in their efforts to extract from him an opinion one way or the other. In fact one gains the distinct impression throughout the book that the American Psychiatric Association did not misplace its confidence in making the award!

Numerous passages in the book deal with deep-sounding but rather superficial analyses of people's motives—in judge, juror, and general public, as well as in lawyers and criminals. The Unconscious gets a big play: some judges are described as anti-Freudian because they are offended by the nasty realism of sexual and aggressive impulses, the actions of jurors are ascribed more to their own personality characteristics and value systems than to the rules they profess to follow, and the emotional genesis of crime is stressed as the major determinant.

The theme conveyed by the title is that the general public shares much of the blame for the present unsatisfactory legal situation because of its insistence on punishment for wrongdoing. The urge to punish is strong in all of us because of our own unconscious repressed aggressive impulses, and this irrationality is the main obstacle to the adoption of a sound penal code. It is ironical, the author adds, that the sexual impulse is often less strong in the sex offender than we suppose, and often much stronger in the rest of us who condemn him. Even Nietzsche is quoted: "Distrust all in whom the impulse to punish is strong."

The concluding section pursues the point with specific reference to the evils of capital punishment. The U. S. A. is described as having what is probably the most ferocious penal policy in the whole civilized world. Here the author rests his case—or perhaps he turns it over to the psychiatrist.



*Today he can discover his errors of yesterday and tomorrow he may obtain light on what he thinks himself sure of today.*

—From the OATH AND PRAYER OF MAIMONIDES



## Discretion Measures the Job

Elliott Jaques

**Measurement of Responsibility: A Study of Work, Payment, and Individual Capacity.** Cambridge, Mass.: Harvard University Press, 1956. Pp. xiii + 143. \$3.00.

Reviewed by DONALD C. PELZ

*who is Study Director of the Institute of Social Research at the University of Michigan, where he has been working for years on supervision and administrative practices as they affect the behavior of employees. In youth he went from Swarthmore and Köhler to Levin at Iowa to the Boy Scouts to CBS's listener reaction and then to Michigan. By keeping one foot in practical work and one in the academic he is able to generate the electromotive force that keeps him going.*

JOB evaluation is a perennial headache for large organizations and the psychologists they hire to find the answer. What is the set of scales for weighing a hundred jobs and telling which ones are worth the same pay? How to measure the 'size' of a job?

The traditional approach takes a dozen yardsticks: 'complexity,' 'accuracy,' 'amount of experience,' and the like, and tries somehow to assess them quantitatively and add them into a meaningful score. Jaques would scrap them all in favor of a single variable: the "maximum time-span of discretion." This is the maximum length of time over which an individual is expected to exercise his discretion in use of company resources before having his decisions reviewed.

A psychoanalyst formerly with the Tavistock Institute of Human Relations, Jaques has worked since 1948 as a "social-analyst" with the Glacier Metal Company, a British engineering company he describes in *The Changing Culture of a Factory*. In 1952 the union-management Works Council requested his help in untangling the salary and status system for supervisors. After exploring numerous yardsticks, he became convinced that time-span was the one basic key.

Measures obtained from subordinates were found to be "absolutely consistent" with data on the same jobs obtained from superiors. By the end of 1954, a study of 450 widely varied jobs revealed that "with only slight variations" persons having the same time-span considered the same pay as proper for their job. Individuals who felt underpaid were in fact found to be earning less than others having the same time-span.

The author found that the measure fitted hourly (nonsupervisory) jobs as well, except that with time-spans of less than a few days he had to take account of the potential damage that inadequate discretion could cause.

Measurement was not always easy and required expert probing. Experienced persons might do their job so smoothly as to be unaware of the discretion they exercised. Mechanisms of review might be indirect, as with customer complaints or re-orders.

Statistically-minded readers will raise eyebrows on points of method. How independent are time-span estimates of the same job from different people, when the same interviewer—however scrupulously—does the probing in both cases? Although mean salaries considered proper for different spans are shown, measures of dispersion are not. Objective quantitative checks are noticeably absent. Thinking more broadly, one wonders whether American organizations, to the extent that they emphasize cooperation, will place the same premium as the British on freedom for individual discretion.

IF objective tests in America sustain Jaques' argument, we would have a powerful tool for equating jobs and distinguishing levels, for correcting dissatisfactions and catching them before they erupt, for intelligent analysis of supervisor-subordinate relations and long-range career planning. Intriguing theoretical speculations could be tested. One is a proposed connection between rate of pay, value of resources controlled during the time-span, and interest rate for investment in that field. This little book could be a pioneering advance in the science of organization.

# FILMS . . .

By ADOLPH MANOIL, Film Editor

## Films

### PSYCHOLOGY OF MARRIAGE

#### The Search: Marriage Counseling

University of Pennsylvania. CBS Television, producer. 16-mm. motion picture film, black and white, sound, 27 min., 1955. Available through Young America Films, 18 East 41st St., New York 17, N. Y., and other distributors. \$125.00, rental \$5.00.

Marriage as a basic social institution presents characteristic problems of adjustment and communication.

On the assumption that an understanding of these problems will lead to better marriage relationships and help to correct specific marriage difficulties, a great effort is being made for public education in that area. Specialists in marriage problems, marriage counselors, and various marriage welfare organizations are at work to help individuals or couples directly involved in such problems. Colleges and universities offer special courses in marriage in which important aspects are described, analyzed, and discussed.

These somehow specialized efforts toward a better understanding of marriage and its problems are being supplemented by the use of mass media of communication, like television and the 16-mm. motion picture film.

In this way research results, new techniques of marriage counseling, and other specialized knowledge are made available to the public in general. The existence of specialized agencies, information about their work, and the nature of the services available are thus communicated. To that extent the 16-mm. motion picture film is an important educational tool. Its effectiveness will depend on the actual impact on the audience, especially as to attitude changes. As a further step toward educational efficiency, most of the 16-mm. films in this field are of a discussion type, providing for maximum par-

ticipation of the audience. Under these conditions their actual efficiency will depend as much on the ability of the discussion leader and the level of the audience as on the quality and content of the film itself.

The film *Marriage Counseling*, here under consideration, presents the features of a good educational tool as to providing information and stimulating discussion on marriage problems. The film presents various approaches to marriage problems and marriage counseling as practiced by the Marriage Council of Philadelphia in conjunction with The University of Pennsylvania's School of Medicine.

The problems presented concern working wives, parental attitudes toward children, and various other marital problems such as infidelity or too high ideals as to married life. The latter appears as a source of difficulty, especially for those entering marriage with unrealistic aspirations.

The need for accurate information on marriage problems and of proper orientation are stressed. Various methods of counseling, as well as characteristic marriage problems, are illustrated through the presentation of the Marriage Council at work, discussion among teen-agers, university classes in marriage, and interviews.

The film could be used with lay audiences as well as with classes in psychology or in marriage. Various film sequences should prove useful as a means for the analysis and discussion of specific marriage problems. With adequate leadership specific problems could be brought under scrutiny and, through proper use of audience needs, maximum participation achieved.

The value of the film could be enhanced through the use of questionnaires and bibliographic information made available to the audience before showing of the film.

### MENTAL ILLNESS

#### The Search: Mental Illness, Part 1

Tulane University. CBS Television, producer. 16-mm. motion picture film, black and white, sound, 27 min., 1955. Available through Young America Films, 18 East 41st St., New York 17, N. Y., and other distributors. \$125.00, rental \$5.00.

Maintaining and promoting mental health constitutes not only a psychiatric problem but a social problem as well. While progress in the knowledge and techniques in this area is being made, the general public is not always accurately informed as to the possibilities of treatment or the more current views on approaches to mental illness. Fears, prejudices, and preconceptions about mental illness are still rampant among people in general. This condition requires supplementing psychiatric progress proper with educational efforts.

Among the means for mass education in the area of mental health, the 16-mm. motion picture film appears as particularly well adapted. In some ways it is better than television, for it can be used at any time; adequate audience participation, moreover, could be easily obtained if proper leadership is available.

The following three films represent an adequate example of educational means for communication of information and promoting better understanding of mental illness both as a psychiatric individual problem and as a social problem.

The film *Mental Illness, Part 1*, illustrates the work of the psychiatrist in its relationship with the patient. Through the use of a one-way screen the viewer could see the psychiatrist at work during a psychoanalytical session. The behavior of the patient in his interaction with the psychiatrist is clearly shown. An interview with a disturbed child, as well as the use of psychological tests, drugs, and other psychotherapeutic approaches to mental illness are also shown.

The film is supplemented with adequate commentaries that explain various film sequences including definitions of terms such as neurosis and psychosis. As a whole it provides an interesting view on general and special aspects of psychiatric work. The film was produced as a 30-min. television program addressed to large audiences. As such it should be

assessed as a means of general information rather than as a technical presentation of specific psychiatric problems.

The film could be used with lay audiences as well as with classes in general and abnormal psychology. Various film sequences could be singled out for analysis and discussion. Depending on the level of the audience and the ability of the discussion leader, the film could provide not only information but also a means for detailed analysis of various individual and social aspects of mental illness.

### **The Search: Mental Illness, Part 2**

Tulane University. CBS Television, producer. 16-mm. motion picture film, black and white, sound, 27 min., 1955. Available through Young America Films, 18 East 41st St., New York 17, N. Y., and other distributors. \$125.00, rental \$5.00.

Mental illness, especially in its severe forms such as schizophrenia, presents difficult psychiatric problems that require continuous research.

This film presents suggestively certain further aspects of research and therapy as practiced in the Department of Psychiatry of Tulane University.

After a brief review of the ideas and situations presented in *Mental Illness* Part 1, the film illustrates various types of treatment that supplement or precede psychotherapy. Such methods as electric shock, insulin shock, or surgery are illustrated or discussed. A session of group psychotherapy is also shown. The need for further work in brain pathology is emphasized. The use of electroencephalography with electrodes implanted directly into the brain is shown; differences related to brain pathology are also demonstrated.

The need for research and especially for a better understanding of various aspects of mental illness is emphasized.

The film is of superior technical quality and succeeds in presenting an area of complex psychiatric and brain-pathological research at the level of the general audience. The film could also be used with classes in general psychology and abnormal psychology. Characteristic film sequences should provide interesting illustrations, for a detailed analysis of neurological and psychiatric aspects of mental illness.

### **Mind and Medicine, Part 1 and 2**

Smith Kline and French Laboratories. American Medical Association and American Psychiatric Association. 16-mm. motion picture film, black and white, sound, 45 min., 1955. Available through Psychological Cinema Register, The Pennsylvania State University, University Park, Pa. (Showing restricted.) Service charge \$1.50.

Various aspects of mental illness with emphasis on psychiatric and social aspects are clearly presented. Different film sequences, supplemented with adequate narration, illustrate various approaches to the understanding of abnormalities of human behavior. Statistical data as given indicate the social aspect of the problem and the pressing need for finding adequate solutions.

The film illustrates the effect of tranquilizing drugs such as promazine and chlorpromazine, as well as of other drugs, such as mescaline.

The use of chlorpromazine results in a reduction in patients' destructive behavior. The chemotherapeutic program is shown to have changed the general behavior of the patients and has allowed many improvements as to the organization and functioning of entire hospital wards.

The second part of the film shows the foster-home colony at Gheel in Belgium, and one in Wallingham Park Hospital near Craydon, England. These foster-home colonies represent an approach to the treatment of mental illness based explicitly on respect for the individual, understanding of the patient, and trust in his ability to recover. The humanitarian aspect of this approach results in a permissive atmosphere in which the patient can establish free relationships with other individuals, without the restrictions and inhibitions implied in seclusiveness. Under this perspective, interaction processes are allowed to develop and affect the individual patient beyond the limited psychiatrist-patient relationship. As stated in the film, "The future lies outside the mental hospital." The treatment, besides its strictly medical aspects, emphasizes rehabilitation through the free practice of human relations. The patients are trusted, not separated from the outside world, and helped to regain confidence and self-respect.

The film as a whole presents a general view on various modern approaches to

the psychiatric patient with equal emphasis on medical and social therapies. It could be profitably used with classes in abnormal psychology, nurses in training, or psychiatric hospital personnel in general.

Characteristic film sequences could be selected for detailed analysis and discussion.

### **COMMUNICATION**

#### **Making Yourself Understood**

Lennox Grey, Teachers College, Columbia University, collaborator. Encyclopaedia Britannica Films, producer. 16-mm. motion picture film, black and white, sound, 14 min., 1953. Available through Encyclopaedia Britannica Films, Wilmette, Illinois, and other distributors, \$62.50.

Communication as a problem in human relations has become a major preoccupation at various levels of analysis. It presents difficult theoretical aspects as well as practical applications. Theoretical aspects of communication are presented in various professional publications. While the discussion of the problem at a higher technical level is useful and necessary for a better understanding of the field and the promotion of research, there still remains the need for information at a lower technical level for the benefit of the undergraduate student and the public at large.

The film *Making Yourself Understood* represents a valuable means for the presentation of characteristic communication problems in a language easily understandable at all levels of intellectual preparation. It presents the concept of communication as a means of establishing meaningful relationships between two or more persons. Language is the main tool of communication, but signs, gestures, and symbols could also be used. The principal factors of the communication process are described as the communicator, the message, the medium, the audience, and the response. The total process is graphically presented in terms of "who is saying what to whom; how, and with what effect?"

Various film sequences illustrate clearly these aspects of communication. The knowledge of the communicator as to his intent should increase the intelligibility of what is communicated; the familiarity



with the signs or symbols used should elicit appropriate responses. Now, since the audience responds in terms of its own attitudes, background and interests, the knowledge of the audience should also allow for a better communication, and appropriate assessment of responses.

The film illustrates the fact that communication is a two-way process and that its effectiveness depends as much on the ability and intent of the communicator as on the receptivity and level of the audience. The message becomes intelligible only within a context of conventional signs familiar to both communicator and the audience. Effective communication presupposes a process in which communication, message, audience and response are meaningfully related.

The film presents the complex problem of communication in terms of everyday life situations. In this way it succeeds in conveying the importance of communication as a means for achieving meaningful human relations.

The film could be used as an adequate means for the analysis of the process of communication. Depending on the ability of the leader and the level of the audience the process could be analysed at different levels of interpretation.

This film is supplemented with a special *Film Guide*, with script, suggestions as to use, and a list of Encyclopaedia Britannica related films.

#### INDUSTRIAL PSYCHOLOGY

### The Time Characteristics of Human Skill

Written and produced by R. Conrad. Photographed by D.C.V. Simmonds with the assistance of Barbara A. Hills. 16-mm. motion picture film, black and white, sound, 20 min., 1956. Available through Applied Psychology Research Unit, 15, Chaucer Road, Cambridge, England. \$45.00.

Appropriate responses to 'signals' represent a problem of adjustment particularly relevant to industrial work, and also in common everyday situations. Any condition that requires a response could be analyzed at two levels: (1) the condition itself, the 'signal', and (2) the ideational and motor response. The 'signal' occurs usually as part of a system or series of signals. Thus we have the

problem of 'displays' in terms of physical and temporal structure. The expected response represents an adjustment that presupposes anticipatory and immediate reactions that relate behavior to 'display.' As 'displays' are usually changing in their temporal structure, behavioral patterns should maintain a continuous readiness of adjustment. This readiness of adjustment and its appropriateness to the requirements of the 'display' define what is commonly called motor skill.

The film *The Time Characteristics of Human Skill* presents the problem of adjustment to 'displays' as a research problem and as a common occurrence in everyday situations.

An apparatus, presenting a display with sixteen dials that have to be stopped by the subject at specified positions, is shown as it is used in laboratory conditions. The recording of subject responses is presented and various theoretical and practical implications concerning the general problem of displays are indicated.

The film is supplemented with diagrams showing certain research results as to relationships between speed and output, work load and errors, speed and errors, and load and output.

Factory and other situations presenting the problem of time characteristics as related to human skill are also shown.

The film could be profitably used as a demonstration of research problems in industrial psychology. It could also illustrate the problem of 'displays' as a problem of adjustment in terms of perception and motor skill.

#### CHILDREN'S ART

### Meaning of Child Art

John Driscoll, Edward Mattil and Mary Filer, The Pennsylvania State University: Saturday Children's Art. 16-mm. motion picture film, color, sound, 10 min., 1955. Available through Psychological Cinema Register, Audio-Visual Aids Library, The Pennsylvania State University, University Park, Pa. \$92.00, rental \$3.00.

Painting as a means of expression in children is clearly presented. Art classes with children provide an opportunity for free activity in which the child experiences factual and perceptive contact with paints, brushes, crayons, colors and other expressive media.

This activity should be seen as an integral part of the process of growth and development meaningful to the child in terms of new and personal experiences.

The art activity of the child should be understood only as a means of expression and relationship to the environment, independently of the actual product. Art classes provide for motivational factors, awareness of the environment, perceptive and sensory experiences.

The film shows a variety of 'art' works produced by children that illustrates their involvement and relationships to the environment. Art activity should be seen as an environmental situation providing for meaningful activity. The film could be used as an illustration of children's activity in relation to art media.

#### PSYCHOLOGY OF GAMBLING

### Project G

The City College Institute of Film Techniques. 16-mm. motion picture film, black and white, sound, 15 min., 1955. Available through Psychological Cinema Register, Audio-Visual Aids Library, The Pennsylvania State University, University Park, Penn. \$85.00, rental \$3.00.

Gambling as a type of human activity presents interesting problems as to its motivational factors and patterns of behavior.

The film *Project G* is an attempt to present pictorially various gambling situations from dice throwing to race bets. Various film sequences show 'teenagers and adults in a variety of gambling situations. Such motives as the desire to 'feel adult,' personal pride in winning, possession of a particular gambling skill, and enjoyment in competitive activities are presented as basic motives for the interest in gambling at all levels.

The film shows gambling as activity that involves individuals at all age levels. As such it presents a problem in motivation and could be analyzed from different points of view.

The film could be used as a discussion device for analysis of gambling with regard either to personal motivation process or to a socially determined behavioral pattern.

## Research Materials Received

*Instructional Film Research Reports.* (Rapid mass learning). Vol. II. (research directed by C. R. Carpenter and L. P. Greenhill, The Pennsylvania State University, Instructional Film Research Program, University Park, Pennsylvania). Port Washington, L. I., N. Y.: U. S. Naval Training Device Center (Tech. Rep. No. 269-7-61) 1956.

The volume contains various film research reports published earlier. Most of these reports have been already reviewed or announced in CP. Each report is preceded by a foreword giving succinct descriptions of the problem, results, and recommendations. The following film research reports are included:

### Theory and Practice

STAFF OF THE INSTRUCTIONAL FILM RESEARCH PROGRAM. *A bibliography of production, utilization and research on instructional films.* Tech. Rep. No. 269-7-40, 1953. Pp. 145.

L. P. GREENHILL, in conjunction with NAVAL RESERVE RESEARCH COMPANY 4-4. *The evaluation of instructional films by a trained panel using a film analysis form.* Tech. Rep. No. 269-7-59, 1957. Pp. 68.

ALLEN L. EDWARDS. *Applications of ranking in film research and the statistical analysis of ranks.* Tech. Rep. No. 269-7-59, 1955. Pp. 26.

### Film Evaluation

ROBERT E. STOVER and DANIEL G. TEAR. *Evaluation of two kinescopes.* Tech. Rep. No. 269-7-38, 1953. Pp. 21.

A. W. VANDERMEER. *Training film evaluation: comparison between two films on personal hygiene: TF 8-155 and TF 1665.* Tech. Rep. No. 269-7-50, 1953. Pp. 27.

CHARLES J. MCINTYRE. *Training film evaluation: FB 254-Cold weather uniforms.* Tech. Rep. No. 269-7-52, 1954. Pp. 37.

### Training Aids

EDWIN F. LEFKOWITH. *The validity of pictorial tests and their interaction with audio-visual teaching methods.* Tech. Rep. No. 269-7-49, 1955. Pp. 18.

G. M. TORKELSON. *The comparative effectiveness of a mockup, Cutaway and projected charts in teaching nomenclature and function of the 40mm antiaircraft weapon and the Mark 13 type torpedo.* Tech. Rep. No. 269-7-100, 1954. Pp. 21.

J. A. MURNIN, A. W. VANDERMEER, and T. VRIS. *Comparison of training media: trainee manipulation and observation of functioning electrical systems versus trainee drawing of schematic electrical systems.* Tech. Rep. No. 269-7-101, 1954. Pp. 30.

THOMAS VRIS. *A comparison of principles training and specific training using several types of training devices.* Tech. Rep. No. 269-7-102, 1955. Pp. 28.

JOSEPH A. MURNIN. *Comparison of training media: transfer of principles involved in a manipulation skill; operation of the aircraft load adjuster slide rule.* Tech. Rep. No. 269-7-103, 1955. Pp. 36.

J. A. MURNIN and A. W. VANDERMEER. *A methodological study in the development of a training aids selection form.* Tech. Rep. No. 269-7-104, 1955. Pp. 12-26.

## The Basis of Selective Attraction

# The Psychology of Sexual Emotion

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Dr. Grant, who is head of the Department of Psychology, Hawthorndon State Hospital, Macedonia, Ohio, presents and critically discusses the varying definitions of sexual love, the state known as "being in love," the phenomenon of choice, or selective attraction, the relation of sexual aesthetics to general aesthetics, and the influence of cultural factors, such as the status of women.

Among the writers whose opinions and observations are quoted are Proust, Santayana, Zola, Flaubert, H. G. Wells, and Stendhal; among the psychologists are Albert Moll, Havelock Ellis, Freud, Jung, Magnus Hirschfeld, Stekel, Krafft-Ebing, and Theodore Reik. Some of the material has never before been available in English translation.

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## ON THE OTHER HAND...

### Instantaneous Anonymity

An author whose heart was too tame  
Avoided the contest for fame;  
His writing satirical,  
Even though lyrical,  
Was rejected for want of a name.

(CP prints this anonymous poem in fulfillment of its promise, made in CP SPEAKS in this issue. How did this anonym know that CP was going to issue this invitation so that he could get his poem published in synchronism with the invitation? The answer is that there is no convincing evidence that anonyms do not have precognition; this null hypothesis remains yet to be disproved.)

## BOOKS RECEIVED

- ALEXANDER, FRANZ, & HUGO STAUB. *The criminal, the judge, and the public: a psychological analysis.* (Rev. ed.) Glencoe, Ill.: Free Press, 1957. Pp. xxii + 239. \$4.00.
- AMBROSE, GORDON. *Hypnotherapy with children.* New York: John de Graff; London: Staples Press, 1956. Pp. 135. \$2.50.
- AMERICAN PSYCHIATRIC ASSOCIATION. COMMITTEE ON PUBLIC INFORMATION. *A psychiatric glossary.* Washington: American Psychiatric Association, 1957 (distributed by the Mental Health Materials Center, 1790 Broadway, New York 19). Pp. viii + 48.
- ARGYLE, MICHAEL. *The scientific study of social behaviour.* London: Methuen, 1957. Pp. viii + 239. 21 s.
- BAIN, H. M., & D. S. HECOCK. *Ballot position and voter's choice.* Detroit: Wayne State University Press, 1957. Pp. xiv + 108. \$1.95.
- BELEVITCH, VITOLD. *Langage des machines et langage humain.* Brussels: Office de Publicité, 1956. Pp. 119. 80 fr.
- BELLAH, R. N. *Tokugawa religion: the values of pre-industrial Japan.* Glencoe, Ill.: Free Press, 1957. Pp. ix + 249. \$5.00.
- BOIS, J. S. *Explorations in awareness: how to improve your skills in observing, thinking, communicating.* New York: Harper & Brothers, 1957. Pp. ix + 212. \$2.75.
- BONE, HARRY (Ed.). *Case reports in clinical psychology.* Vol. III, Nos. 3 & 4: *An issue devoted to psychotherapy.* Brooklyn, N. Y.: Department of Psychology, Kings County Hospital, 1956. Pp. 111-179 [69]. \$2.75.
- BOSSARD, J. H. S., & ELEANOR STOKER BOLL. *One marriage, two faiths: guidance on inter-faith marriage.* New York: Ronald Press, 1957. Pp. vii + 180. \$3.50.
- BRUCH, HILDE. *The importance of overweight.* New York: W. W. Norton, 1957. Pp. x + 438. \$5.95.
- BURN, MICHAEL. *Mr. Lyward's answer.* Boston: Beacon Press, 1957. Pp. 288. \$3.95.
- CAPA, CORNELL, & MAYA PINES. *Retarded children can be helped.* Great Neck, N. Y.: Channel Press, 1957. Pp. 159. \$5.00.
- CARMICHAEL, LEONARD. *Basic psychology.* New York: Random House, 1957. Pp. 340. \$3.95.
- CAVANAGH, J. R. *Fundamental marriage counseling: a Catholic viewpoint.* Milwaukee: Bruce Publishing Co., 1957. Pp. xxiv + 598. \$8.00.
- COOK, LLOYD, & ELAINE COOK. *School problems in human relations.* New York: McGraw-Hill, 1957. Pp. xi + 292. \$5.50.
- EDUCATIONAL RECORDS BUREAU. *1956 Fall testing program in independent schools and supplementary studies.* (Educational Records Bulletin No. 69.) New York: Educational Records Bureau, 1957. Pp. xii + 74.
- FRAZIER, E. F. *Black bourgeoisie: the rise of a new middle class in the United States.* Glencoe, Ill.: Free Press, 1957. Pp. 264. \$4.00.
- GALDSTON, IAGO (Ed.). *Medicine in a changing society.* (N.Y. Academy of Medicine, Lectures to the Laity, No. XVIII.) New York: International Universities Press, 1956. Pp. x + 166. \$3.00.
- GLICK, P. C. *American families: a demographic analysis of census data on American families at mid-century.* New York: John Wiley & Sons, 1957. Pp. xiv + 240.
- GRÉGOIRE, F. *La nature du psychique.* Paris: Presses Universitaires de France, 1957. Pp. 131. 240 fr.
- GUTWIRTH, S. W. *You can stop worrying.* Chicago: Henry Regnery, 1957. Pp. ix + 114. \$3.00.
- HOMME, L. E., & D. J. KLAUS. *Laboratory studies in the analysis of behavior: a manual of operant conditioning procedures for students in behavioral psychology.* Pittsburgh: Lever Press, 1957 (distributed by Headlee's Book Exchange, 810 Inwood St.). Pp. 134. \$2.85.
- KATZ, BARNEY. *You can have a better marriage.* New York: American Press, 1957. Pp. 177. \$3.00.
- KORNHAUSER, ARTHUR (Ed.). *Problems of power in American democracy.* Detroit: Wayne State University Press, 1957. Pp. ix + 239. \$5.00.
- LANGER, MARION. *Learning to live as a widow.* New York: Julian Messner, 1957. Pp. 255. \$3.95.
- MINER, J. B. *Intelligence in the United States: a survey, with conclusions for manpower utilization in education and employment.* New York: Springer Publishing Co., 1957. Pp. xii + 180. \$4.25.
- MUNITZ, M. K. (Ed.). *Theories of the universe: from Babylonian myth to modern science.* Glencoe, Ill.: Free Press, 1957. Pp. x + 437. \$6.50.
- PAVLOV, I. P. *Experimental psychology and other essays.* New York: Philosophical Library, 1957. Pp. 653. \$7.50.
- PERLMAN, HELEN HARRIS. *Social casework: a problem-solving process.* Chicago: University of Chicago Press, 1957. Pp. xv + 268. \$5.00.
- RADCLIFFE-BROWN, A. R. *A natural science of society.* Glencoe, Ill.: Free Press, 1957. Pp. xii + 156. \$3.50.
- ROHDE, AMANDA R. *The sentence completion method: its diagnostic and clinical application to mental disorders.* New York: Ronald Press, 1957. Pp. xii + 301. \$7.50.
- ROSEN, ELIZABETH. *Dance in psychotherapy.* New York: Bureau of Publications, Teachers College, Columbia University, 1957. Pp. xx + 178. \$4.50.
- ROSENBERG, BERNARD, & D. M. WHITE (Eds.). *Mass culture: the popular arts in America.* Glencoe, Ill.: Free Press, 1957. Pp. x + 561. \$6.50.
- RUESCH, JURGEN. *Disturbed communication: the clinical assessment of normal and pathological communicative behavior.* New York: W. W. Norton, 1957. Pp. viii + 337. \$6.00.
- SARASOHN, S. B., & VERA H. SARASOHN. *Political party patterns in Michigan.* Detroit: Wayne State University Press, 1957. Pp. x + 76. \$1.75.
- SARGANT, WILLIAM. *Battle for the mind: how evangelists, psychiatrists, politicians and medicine men can change your beliefs and behavior.* Garden City, N. Y.: Doubleday, 1957. Pp. 263. \$4.50.
- SIMON, H. A. *Administrative behavior: a study of decision-making processes in administrative organization.* (2nd ed.) New York: Macmillan, 1957. Pp. xlviii + 257. \$5.00.
- SIMON, H. A. *Models of man: social and rational.* New York: John Wiley & Sons, 1957. Pp. xiv + 287. \$5.00.
- SOUTHARD, SAMUEL. *The family and mental illness.* Philadelphia: Westminster Press, 1957. Pp. 96. \$1.50.
- SPRIEGEL, W. R., EDWARD SCHULZ, & W. B. SPRIEGEL. *Elements of supervision.* (2nd ed.) New York: John Wiley & Sons, 1957. Pp. xii + 349. \$6.00.
- STACEY, C. L., & M. F. DEMARTINO (Eds.). *Counseling and psychotherapy with the mentally retarded: a book of readings.* Glencoe, Ill.: Free Press, 1957. Pp. 478. \$7.50.
- THIGPEN, C. H., & H. M. CLECKLEY. *The three faces of Eve.* New York: McGraw-Hill, 1957. Pp. ix + 308. \$4.50.
- THOMPSON, HELEN M. *Swierl: a plan for better reading.* New York: Vantage Press, 1957. Pp. 163. \$3.50.
- UNDERWOOD, B. J. *Psychological research.* New York: Appleton-Century-Crofts, 1957. Pp. vii + 298. \$4.00.
- VAKIL, C. N., & P. H. CABINETMAKER. *Government and the displaced persons: a study in social tensions.* Bombay: Vora & Co., 1956. Pp. xix + 144. \$1.00.
- VAKIL, C. N., & USHA MEHTA. *Government and the governed: a study in social tensions.* Bombay: Vora & Co., 1956. Pp. xv + 99. \$1.00.
- WARNER, S. J. *The urge to mass destruction.* New York: Grune & Stratton, 1957. Pp. xii + 188. \$3.50.
- WHYTE, W. H. *The organization man.* New York: Simon & Schuster, 1956. Pp. 429. \$5.00.



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